Edited by Tamás Dezső and Gábor Kalla

THE ARCHAEOLOGY OF THE RAPARIN REGION OF IRAQI KURDISTAN

A Review of Results from the Field and Directions of Further Research

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Preface

Lectori Salutem!

During the last decade several archaeological missions worked in Iraqi Kurdistan, in the Eastern part of the country, especially on the Rania and Peshdar Plains. A new survey of J. Giraud and four archaeological excavations placed a lot of archaeological sites on the map not only of Iraq, but also on the virtual map of different historical periods, for example the Early Iron Age, the Neo-Assyrian and the Parthian periods. New centers seem to have emerged and new information was gathered, which shed light not only on the settlement pattern and hierarchy of the two plains, but on the material culture and the nature of the imprint for example, which the Assyrians left on the region and the nature of their imperial occupation.

It is obviously not a simple coincidence, that the results of the excavations of those four archaeological expeditions, which have been active on the field during the last years show a very strong Assyrian influence on the region. The Danish Archaeological Expedition to Iraq uncovered a Neo-Assyrian fort on the tell of Gird-i Gulak (*see* the report in this volume), the archaeological expedition of the British Museum uncovered an Assyrian small fort at Usu Aska in the Darband (pass) of the Lower-Zab River connecting the Peshdar and Rania Plains (*see* the report in this volume), the German archaeological expedition of the Munich and Münster Universities uncovered a huge settlement (Dinka Settlement Complex) which sheds light on the Iron Age of the Northern Zagros (*see* the report in this volume), and finally the Hungarian Archaeological Mission of the Eötvös Loránd University to Iraqi Kurdistan excavated Grd-I Tle, a large tell with extensive Neo-Assyrian layers and substantial walls, which proves that the settlement was an Assyrian military/administrative center during the period of the Assyrian occupation (880 – approx. around 620 B.C.). Now we know, that the Rania and Peshdar plains were rallying points, deployment regions, and supply bases for the Assyrian expeditionary armies heading towards their Eastern and Northeastern destinations. During the last decade a *mātu*, a border province of the Assyrian Empire was identified by the German expedition: it can be concluded that the Peshdar Plain was the *mātu*, the border province of a high official, the *nāgir ekalli*, the Palace Herald of the Assyrian court.

On the 9th of March, 2020 a workshop was organized in Budapest, at the Faculty of Humanities, Eötvös Loránd University which focused on the new results of excavations of the above mentioned four archaeological missions to Iraqi Kurdistan. The title of the workshop was: *The Archaeology of the Raparin Region of Iraqi Kurdistan. Results from the Field and the Directions of the Further Research*. In this publication we have collected the papers/articles presented at this workshop.

Tamás Dezső

The Rania Plain in the Neo-Assyrian Period

A reconstruction of the military, civilian and economic administration of the region within the framework of the Neo-Assyrian Empire (A preliminary study for a detailed survey)

Tamás Dezső

The aim of this study is to derive preliminary implications about the possibility of the reconstruction of the settlement pattern and settlement hierarchy of the Rania Plain during the Neo-Assyrian period. This reconstruction will reveal the Assyrian administrative hierarchy of the Rania Plain, as an independent, geographically very well defined and isolated region on the eastern border of the Assyrian homeland. To this end, this preliminary study is based on the surveys, excavations, and observations conducted on our expeditions, which tried to map and reconstruct the archaeological enviroment of the sites, their surroundings, and the whole Rania plain, including the Bngrd region as well.

The physical characteristics of Grd-i Tle and its surroundings

The walls of the ancient settlement

As mentioned in the preliminary reports of our excavation published previously, the ancient settlement of Grd-i Tle was heavily fortified in almost every period throughout ancient and medieval times.[1] At least six consecutive walls have been identified so far, ranging from the Neo-Assyrian period to the 19th century (*Fig. 1*). We have not yet reached earlier layers to identify the fortifications of the earlier periods.

During the fourth excavation season (2019), in Trench 1/A, we encountered the same phenomenon or feature, which we have been excavating for two years (2017, 2018). This feature (*Fig. 2*) (SNR 142) is a huge earthen ramp, the structure of which is a quite homogeneous fill with pottery sherds, pieces of charcoal, and daub. This fill is obviously a conscious phenomenon, a built ramp. The immense size (the height of the layer is 6.06 m!) of this earthwork makes it clear that such a work could have been conducted only by an imperial power, namely the Assyrians.

[1] Dezső – Mordovin 2016, 241-262. Dezső – Kalla et al. 2016, 233-240; Dezső – Kalla et al. 2017, 361-392; Kalla – Dezső 2019, 1-12.

The accumulations of pottery sherds contain a lot of Neo-Assyrian sherds (palace ware and other types of fine ware) and local Iron Age sherds (common ware and coarse ware). It remains to be studied whether these Iron Age pottery sherds were themselves also Neo-Assyrian wares or belonged to the local Iron Age pottery tradition. Interestingly, some of the pottery sherds seems to belong to much earlier periods – to the Bronze Age or even the Chalcolithic. This constellation of pottery sherds from various periods means that sometime during the Neo-Assyrian period (which lasted at this site from 883 B.C. to approximately 620 B.C., more than 260 years) the existing settlement was destroyed for an unknown reason and the Assyrians completely rebuilt the site, widening the plateau and enlarging its surface most probably by several meters to provide more space for domestic architecture and official buildings. The rubble originating from the destroyed settlement (destroyed mudbrick structures) was used to provide a solid earthen ramp, which provided an additional defence system (a steep ramp) to the settlement. It seems quite clear that these Neo-Assyrian earthworks touched and destroyed some earlier layers on the top of the site or around it, which resulted in the appearance of pottery sherds from earlier periods (Bronze Age and Chalcolithic) in the fill.

During the last week of the campaign we eventually reached a layer, most probably a burnt mudbrick structure, which should have been part of an earlier layer (a series of layers: SNR 187, 188, 192–197), on which the Assyrians built the ramp. Pottery sherds originating from these layers would identify the period of destruction upon which the Assyrians built the ramp; it is, however, quite clear that the earlier layer on which this Assyrian ramp was built was destroyed by a heavy conflagration, the origin of which (natural cause or deliberate destruction, as for example a siege) is so far unknown.

According to the Corona satellite images from 1968 (*Fig. 4, 5*), and the recent Google and other satellite images (*Fig. 6, 7*) the site of Grd-i Tle was fortified not only along the top of the 31 m high tell discussed in detail above: The lines of at least two or three other walls can be identified from the satellite images and on the surface of the site as well.

1) One wall followed the line of the base of the actual tell, the diameter of which is 250 m, while the diameter of the top of the tell is 97 m.
2) The second line (nowadays in the form of a ditch) encircled a much larger territory, that of an actual lower town, of hexagonal shape (*Fig. 8*). The dimensions of the actual lower town are 450 m long (North–South) and 340 m wide (East–West).
3) A third line traces an artificial riverbed on the Eastern side of the site. It might seem to be a modern irrigation canal, but it is 3 m wide and at its bed runs at least 2 or 3 m under the surface level of the surrounding fields, so it cannot be used for irrigation. Furthermore, the normal bed of the river just 50 m to the West would easily serve the purpose of irrigation. So it seems to the present writer that the primary function of this artificial branch of the river was to provide an additional defended territory to be used for even habitational purposes. This artificial branch of the river enclosed a rhomboid area of 790 m long (North–South) and 410 m wide (East–West). The shape of this outer area seems to follow a conscious plan. The Southern tip of this region yielded three small bronzes as surface finds.

Finally, it should be mentioned that there is a 'shoulder' in the mid height of the slope tell, which could also easily indicate a revetment wall.

The gates and bridges of the ancient settlement

From the same satellite images and also partly from our excavations, several entrances (gates and bridges) to the ancient settlement can confidently be identified. However, further research is needed

to confirm these observations and decide which period the above- and below-mentioned features (walls and gates) belong to.

1) On the Northern part of the outermost 'wall' there is a bridge, built on the same place where the Corona images show that the original road crosses the bed of the artificial canal and enters into the site.
2) Along the riverbed, on the Western side of the site we found a two huge rocks on the Eastern bank of the river submerged partly into the riverbed, which served most probably as the pier of a wooden bridge (*Fig. 9*). The road leading to the bridge in the lower town is visible on the satellite image as well.
3) Along the riverbed in the Southwestern part of the lower town, there are two features which seem to be the bases of two rounded towers, forming a gate out. These feature are very faint, so an excavation should establish whether we can talk about a gate or not.
4) The fourth feature can be identified from the satellite images. The road entering the lower town crosses the wall of the lower town at this point, so there was probably a gate on the wall.
5) The fifth feature is similar to the previous one. However, the road leading from gate no. 5 on the outer wall of the lower town to gate no. 8 is clearly visible on the satellite images and also in the rice field which occupies the plot today.
6) The sixth feature was most probably also a gate at the Southeastern front of the 'wall' of the lower town, the location of which is clearly visible on the satellite images.
7) The seventh feature is situated on the Northern face of the lower wall of the tell, along the road coming from gate no. 4. At the spot, where this road crossed the lower wall of the tell, there was probably a gate. The location of this feature can also easily be identified on the satellite images.
8) The eighth gate is the pair of feature no. 5; the road leading from feature no. 5 reaches the line of the lower wall of the tell at that point. During the 2017 season, we opened a trench here and excavated part of this Eastern gate of the site. The excavated gate structure was dated to the Parthian period, but we did not continue the work here to reach the deeper layers.
9) The ninth feature can also only be identified on satellite images. There is a good possibility that there was a gate here on the Southern front of the lower wall of the tell.
10) Feature no. 10 can also be identified on satellite images, but there is also a good possibility that there was a 'water gate' on the Southwestern front of the lower wall of the tell.
11) The 11th feature is situated on the Southern edge of the plateau on the top of the tell. A quite large depression with two walls flanking it refers to a gate, which in its recent form would belong to the latest phase of the occupation of the tell. Its connection with any roads leading to the top of the tell is unconfirmed.
12) The last feature (12th feature) can be seen on the Northern slope of the tell. The slight depression leading from the bottom of the tell to the edge of the plateau refers most probably to a staircase/steps on which – similarly to other examples from medieval/Islamic architecture (e.g. the steps leading to the top of the Qalat at Aleppo) – one can enter the upper town. Around halfway up the steps there are two piles flanking the steps; these might be the bases of two towers.

The archaeological landscape – the surroundings of Grd-i Tle

Following the description of the defensive system of Grd-i Tle, we should map the immediate vicinity of our site. As *Fig. 10 and 11* show, several smaller, satellite sites can be spotted around Grd-i Tle. There are at least threesmaller and a larger site in the surroundings of Grd-i Tle; these sites – in certain periods – functioned in interaction and symbiosis with our site, the ancient town of Grd-i Tle. The number of these satellite sites should grow with a systematic survey, which we are planning to do.

1) Site no. 1 (*Fig. 11*). A few hundred meters to the West, on the opposite bank of the river, there is a small site of approximately 60–80 m in diameter, which – during a superficial survey in 2016 – yielded stones from buildings and some pottery sherds, consisting of Iron Age and/or Parthian sherds only. The profile of this satellite site was most probably economic.
2) Site no. 2 (*Fig. 11*). The second satellite site lies a few hundred meters to the South of site no. 1. When this site was identified in 2016, we found large bumps of dross, with some sherds dated most probably to the Parthian period. The dross inevitably refers to a compound – a blacksmith's yard or several yards, with smelters and forges. It makes sense to 'outsource' such a dangerous, highly inflammable site as a blacksmith's compound with forging facilities, including smelters, from the densely populated town to another place on the other side of the river, as the river would stop a conflagration and prevent the town from burning. As has been mentioned, by the first autopsy the pottery sherds were dated to the Parthian period; however, it is still unknown whether this small site has earlier layers or not.
3) Site no. 3 (*Fig. 11, 12*). This site is a small tell of 130 m diameter some 750 m South of Grd-i Tle along the river. This site was identified only from a Corona image.

The military landscape and the role the Rania Plain could have played in the military administration of the Neo-Assyrian Empire

From the military point of view, the Rania Plain was one of the most important relay points of the Assyrian Eastern expansion and one of the most important supply centres of this expansion. The plain was most probably also a meeting point of the troops of the Assyrian expeditionary army. In this light, three aspects of the plain's military role have to be discussed.

The Rania Plain as a strategic meeting point at the crossroads of the Assyrian Eastern expansion

As our map (*Fig. 15*) shows, the Rania Plain has four 'gates' or entry-points, leading towards the four quarters of the world.

1) The Western gate/entrance is the way through which – between the mountain passes – the road from Erbil (ancient Arbela, Arba'il) descends to the Rania Plain. This was the route on which the Assyrian troops arrived at the Rania Plain and, in their return from the

campaign, marched back to Arbela. The ancient route followed more or less the modern road leading to Erbil.

2) The Northern gate is a narrow pass, through which the modern road goes in the direction of the modern Shaqlawa, or Rowanduz, and Soran, or the ancient Ḫabriuri, and thence in ancient times to Muṣaṣir, Mannai and Urarṭu. Most probably this was the route which the Assyrian troops of Assurnasirpal II followed in 883 B.C., when they conquered the region.
3) The Eastern gate is the pass (Darband) where the (Lower) Zab River enters from the Pshdar Plain to the Rania Plain. This narrow pass along the riverbed was also a natural border to the East. This was the route through which the Assyrian troops entered into the Pshdar Plain (the province (*mātu*) of the Palace Herald (*nāgir ekalli*), an Assyrian high official). From the Pshdar Plain, several mountain passes and routes offered many possibilities to reach Mannai, Andia, Allabria, Parsua, Media, and other political entities of the Zagros region. This pass was guarded and monitored by an Assyrian border fort on the Southern bank of the Zab River, excavated by the expedition of the British Museum.[2]
4) The Southern gate is a narrow mountain pass through the meanders of which the Zab River leaves the Rania Plain. The Dukan Dam in the strait pass formed the Dukan Lake from the water of the river. The route along the hillside of the pass leads to the Shahrizor Plain (Assyrian Māzamua), the other meeting point of the troops of the Assyrian expeditionary army[3] and also an important supply region for the expeditionary army.

The Rania Plain as a supply centre for the Assyrian army during the Eastern expansion

The parameters of the rhomboid valley of the Rania Plain are as follows: the length is 47 km (N–S) and the maximum width is 31 km (W–E). The size of the arable land in the Rania Plain is 440 km^2. In ancient times there were two periods (the Assyrian and Sassanian periods) when the use of the available farmland peaked. If only 70% of this territory were under cultivation, not less than 308 km^2 (30,800 hectares) would have been cultivated by the local people in the Neo-Assyrian period, when – according to the Assyrian royal correspondence – the government placed stress on the local authorities to maximize the crop production in the territories under their supervision.[4] In addition to the yearly rainfall, there are enough water sources to irrigate large parts of the plain (with two harvests per year), which made this plain one of the most fertile parts of the region. It is known that in the Neo-Assyrian period a soldier got a daily ration of 2 L (about 1.5 kg) of grain. If we suppose that these approximately 30,000 hectares were cultivated and the average yield was only 2 tons of grain/ha, the plain could have provided 60,000 tons (60 million kg) of grain per year, or enough to support approximately 109,589 persons for a year,[5] a number that obviously exceeded the contemporary population of the plain. Even this underestimated capacity would have been enough to make the Rania Plain (administered at least partly from Grd-i Tle) one of the most important supply centres of the Assyrian army on the route Eastward during their Eastern expeditions.

[2] https://www.britishmuseum.org/about_us/museum_activity/middle_east/iraq_scheme/darband-i_rania_project.aspx.
[3] As known from the Assyrian royal correspondance. *See* Saggs 2001, 128-130, NL 89 (ND 2631); Lanfranchi – Parpola 1990, 215; Postgate 2000, 89-108; Fales 2000, 40-43; Dezső 2012, 36, 50, 72, 77, passim; Dezső 2016, 48, *Fig. 16*.
[4] Dezső 2016, *passim*, esp. 87, 89.
[5] For the rations of the Assyrian army, *see* Dezső 2016, 60-104.

The Assyrian military presence in the archaeological record

As has been mentioned, a few sites and archaeological features will help us to reconstruct the archaeologcal imprint of the Assyrian military presence on the Rania Plain. Three types of archaeological sites and features will be taken into consideration:

1) The Assyrian defence systems of the larger sites, including walls and such monumental ramps as have been discovered on the tell of Grd-i Tle.
2) The Assyrian military camp. This hypothetical identification will be a quite clear, indicative sign of the Assyrian military presence. Such a military camp could survive for centuries and serve as a garrison for troops on duty.
3) Small forts. Assyrian royal correspondance refers frequently to small forts as bases for borderguard duties.[6]

Since the Assyrian layers of Grd-i Tle have been discussed above, now we will concentrate on the hypothetical military camps and the Assyrian small forts.

Puka Upper – an Assyrian military camp?

The fourth site is Puka Upper (Poke Saru) some 1,860 m South of Grd-i Tle along one of the branches of the river (*Fig. 11–13*). The Corona satellite image shows a clear picture of a circular site with four gates (*Fig. 13*). The diameter of the site is 145 m. The present writer visited Poke Saru in September 2019, but during the past decades the site had become a densely built village with very abundant vegetation, which – together with the houses and other buildings – almost completely veiled the original features of the site. Even so, the present writer plans a thorough survey and even a test trench to check the date of the site.

The most striking feature of the site is its shape (*Fig. 13*). To sum up the characteristic features which hint that this site was an Assyrian military camp, we must include the following:

1) The Corona image shows a circular site, which is surrounded by two branches of the river, the water of which filled a moat encircling the site. This moat provided additional defence, and the river provided a source of freshwater.
2) The Corona image shows clear signs of a circular rampart, which defended the ancient site.
3) This ancient site had 4 gates in opposite positions with embankments intersecting the moat. The four roads leading into or out of the site crossed the moat on these embankments.

In the present writer's view, these features strongly indicate that this site was an Assyrian military camp. The site's physical layout shows a close resemblance to that, for example, of the 9th century B.C. Assyrian military camp depicted on the palace reliefs of Assurnasirpal II (883–859 B.C.) (*Fig. 13*); as has been mentioned, this region was conquered in 883 B.C., during the first regnal year and campaign of that king,[7] and remained under Assyrian rule till approximately 620 B.C. It is possible that the initial camp was built for the siege of Grd-i Tle itself but that the military camp functioned as a permanent Assyrian garrison on the plain for the full 260 years. This garrison could have quartered a few hundred soldiers on duty, while other soldiers (the relief) were on leave in their nearby villages or towns.

The position of the site on the Rania Plain is strategic, since it is situated overlooking the crossroads of the main roads of the plain. The 'camp' is on the highway which leads to the North, toward

[6] Dezső 2012, 78-81; Dezső 2016, 71-73.
[7] Grayson 1991, A.0.101.1, i:43b-54a and i:54b-58a.

the province of Ḫabriuri and eventually Muṣaṣir and Urarṭu. The Southern tip of the mountain ridge above the 'camp' overlooking the whole plain provides an excellent observation post. From this watchpost the watch could have monitored all the troop movements and traffic on the Rania Plain. Furthermore, its proximity to the largest site of the plain (Grd-i Tle) lets us suppose that, 1) as has been suggested, it was built for the Assyrian siege of Grd-i Tle, for example in 883 B.C., and/or 2) served as a military outlet or garrison of the town, which itself was an administrative centre of the region.

Further motifs would corroborate the military camp theory as it makes no sense to build a circular rampart to defend an ordinary settlement; moreover, the present writer does not know of any similar settlement types from the archaeological record.

This military camp theory is undoubtedly a tempting one, but remains only a theory till a thorough survey, test trench, or excavation confirms it.

Usu Aska – Assyrian small fort

During the last few years, members of the archaeological expedition by the British Museum have excavated a small fort in the narrowest part of the Pass of Rania (Darband-i Rania), right on the Southern bank of the Zab River (see the article of John MacGinnis in this volume). The role of this small fort was to control and defend the pass. The Assyrians invested a lot of energy into building a network of forts of different sizes to control the strategic points of the border regions. These small forts were garrisoned by local troops and auxiliary soldiers, and the network of them played an important role in reconnaissance and monitoring duties along the border.[8] This small fort, Usu Aska, is one of the first Assyrian border forts, which have been convincingly identified and dated to the Neo-Assyrian Period.

Two further archaeological sites easily fall into the category of Assyrian small forts.

1) **Panka Lawaz** (no. 41). 'On the foothills in the south of Merga Mountains, a large rectangular building lying, overlooking the Zab River. It's built with large stone.'[9]
2) **Gawr Qalat** (no. 55). 'The site lies between two rocky crests. Two stone walls protect the site between the two crests. These fortifications are made of squared large stones *(Fig. 58)*, built without any filling. Inside the building, several architectural remains can be distinguished. The type of walls and the absence of artifacts do not permit us to date it, but it could be quite recent (late medieval?). The function of the site should be to control the road leading to the Rania plain.'[10]

The strategic location (overlooking the main routes of communication) of these sites and their physical characteristics (relatively small rectangular stone buildings without surface finds) make them good candidates to be identified as Neo-Assyrian small forts, since these profiles were quite (or only)characteristic of these small forts.

It seems quite plausible to suppose that a whole network of Assyrian small forts existed in strategic locations along the mountain ranges bordering the Rania Plain. This region provides a unique opportunity to reconstruct several elements of the Assyrian military administration and the network of its physical manifestation (military camp (?)), and small (border) forts).

[8] Dezső 2012, 78-81; Dezső 2016, 71-73.
[9] Giraud 2013B, 161.
[10] Giraud 2012, no. 1, p. 44.

The settlement hierarchy of the Rania Plain during the Neo-Assyrian period

Parallelly with the excavation of the tell of Grd-i Tle proper, members of the Hungarian expedition realized the important role this strongly fortified site played over the course of its history, especially in the Neo-Assyrian period in the Rania Plain – on the Eastern borderland of the core area, the homeland of Assyria. We realized at first sight what a strategic location the tell occupies on this plain, flanked by mountain ranges and forming an independent ecosystem.

The other important development was that during the last few years at least three other archaeological sites in the immediate vicinity of Grd-i Tle on the Rania Plain or on the neighbouring Pshdar Plain yielded important Neo-Assyrian/Iron Age layers. These sites are as follows: Grd-i Gulak[11] and Darband-i Rania[12] on the Rania Plain and Gird-i Bazar and Qalat-i Dinka[13] on the neighbouring Pshdar Plain; the latter plain has convincingly been identified by the German expedition with the province ('Land', Akk. *mātu*) of the Assyrian Palace Herald (*nāgir ekalli*). The data derived from these archaeological sites and from Grd-i Tle have reached a critical mass which should place the Rania and Pshdar Plains, and especially Grd-i Tle, on the map of the Neo-Assyrian Empire. It has to be mentioned, however, that a few larger sites (Tell Shemshara,[14] Basmusian, the large tell of Qaladze) and several smaller, still unidentified sites[15] have also to be placed on this map. The number of identified sites which probably have Assyrian layers is around 60,[16] but new surveys would easily increase this number.[17]

Our reconstruction is based on three previous surveys. The first was conducted in the 1950s by Iraqi archaeologists, who mapped primarily the area flooded by the water of the Lower Zab River when the Dukan Dam was built.[18] The next survey was conducted by the joint expedition of the NINO and the University of Copenhagen led by J. Eidem and T. Skuldbøl.[19] The third survey project was conducted by Jessica Giraud; a total of 171 sites were recorded in the Rania and Peshdar Plains and their surrounds by her subsequent expeditions during 2013.[20] In the Rania Plain, in the first season (2013 spring), the survey identified and recorded 76 sites, which grew to 111 with the 35 other sites recorded during the second season (2013 autumn).[21] A further 50 sites were recorded in the Bngrd region of the plain, for a total of 161. A further 43 sites were recorded in the neighbouring Pshdar Plain, which is out of the scope of our study, since this valley most probably formed a separate province in the Neo-Assyrian Empire (the Province of the Palace Herald). Altogether, 61

[11] This smaller tell site was excavated by an expedition from the University of København led by Tim Boaz Bruun Skuldbøl. The site yielded at least one larger building and walls dated to the Neo-Assyrian Period. https://urbarch.tors.ku.dk/.

[12] A small Assyrian fortress guarding the strait along the Lower Zab between the Pshdar Plain and the Rania Plain. The site is excavated by an international team of the British Museum. The expedition is led by John MacGinnis. https://www.britishmuseum.org/about_us/museum_activity/middle_east/iraq_scheme/darband-i_rania_project.aspx.

[13] These sites are excavated by the members of the expedition from the Ludwig-Maximilians Universität München. The expedition is led by Karen Radner and Janosha Kreppner. https://www.en.ag.geschichte.uni-muenchen.de/research/peshdar-plain-project/index.html.

[14] http://www.nino-leiden.nl/projects/rania-plain-tell-shemshara.

[15] https://www.brown.edu/Departments/Joukowsky_Institute/resources/alsoof/files/9507529.pdf.

[16] http://www.nino-leiden.nl/projects/rania-plain-tell-shemshara.

[17] For more information on the Danish survey: https://www.researchgate.net/publication/305986433_First_Results_of_the_Rania_Plain_Survey_Salvage_Operations_in_the_Dokan_Dam_Inundation_Zone; about the NINO survey: http://www.nino-leiden.nl/projects/rania-plain-survey; about the survey of Jessica Giraud: https://www.academia.edu/25056270/The_Soulaimaniah_Governorate_Archaeological_Survey_Missions_Iraqi_Kurdistan_2012-2016_district_of_Rania_Peshdhar_and_Dukan.

[18] Abu Al-Souf 1970, 65-104; Eidem 2011, 13-19.

[19] Eidem 2012, 2-11; Eidem 2013–2014, 2-9; Eidem 2015, 2-13; Eidem 2016; Eidem 2017.

[20] Giraud 2013B, 2, Fig. 1.

[21] Giraud 2013B, 15, Fig. 13.

sites have been identified by Jessica Giraud on the Rania and Pshdar Plains which can be dated to the Neo-Assyrian Period. The density of the Neo-Assyrian sites is much greater than that of the previous period, the Late Bronze Age, when only 5 sites provided a large quantity of diagnostic pottery sherds. Giraud observed correctly that the pattern of the Assyrian settlements followed on one side the major axes of communications and that on the other side there were no blind spots, since the use of land was at its peak during the Neo-Assyrian Period.

The traditional method of reconstructing a settlement pattern was based mainly on the amount of pottery sherds from a given period (Iron Age/Neo-Assyrian) collected as surface finds at a given site and the size of the territory over which these sherds were dispersed. This method reflects, however, only the fact that the site was inhabited during the given period (Iron Age/Neo-Assyrian), not necessary the size of the settlement or its place in the hierarchy of the settlements surveyed. The amount of pottery sherds collected as surface finds depends on several *ad hoc* factors and cannot be used to build a settlement hierarchy. This 'two-dimensional', 'horizontal' approach should be complemented by a 'three-dimensional', 'vertical' approach, since, according to the 'horizontal approach', Grd-i Tle, the largest site on the Rania Plain, might be classified only as a lower medium size/importance site, which is obviously not the case, as we have already discovered and excavated large, densely inhabited surfaces of the Neo-Assyrian period (terraces with Neo-Assyrian houses/workshops) and the huge Assyrian earthen ramp discussed above.

The present paper makes an attempt to complement the 'two-dimensional', 'horizontal' approach with a 'three-dimensional', 'vertical' approach; doing so – according to the present writer's view – reflects much better to the Assyrian perception of the settlement hierarchy and consequently the administrative hierarchy of the Rania Plain, a well-defined region of the Assyrian Empire. The Assyrians used in their royal inscriptions at least a three-level division, into the fortified capital, fortified cities, and other settlements around them: Sargon II (721–705 B.C.) for example in 714 B.C. conquered Bīt-Sangibūti, the capital city of Ulḫu, its 21 'strong cities', and 140 other settlements in their vicinity.[22] The three-level hierarcy is quite clear and reflects the military view and priorities.

This 'three-dimensional' approach is based on the characteristics and size of the sites we are dealing with. Four categories will be used for a tentative reconstruction of a possible settlement and administrative hierarchy. It should be emphasized, however, that this reconstuction is based on the previous surveys mentioned above and is meant to complement rather than supersede them. The basic information – where has Assyrian/Iron Age pottery been found – originates from these surveys. However, the following system and logic better represents the Assyrian perception of the settlement hierarchy. It should, however, be emphasized, that such a categorization – based on the Assyrian logic, the excavations of Grd-i Tle, and eventually the size of the tells and sites surveyed – could easily end up arbitrary as long as excavations do not verify the theory behind it. However, at the moment, as a working hypothesis, we can use it to reconstruct something more than can be derived from the nature and ratio of surface finds and accumulations of pottery from different periods.

1) The first level is the highest level in the settlement and administrative hierarchy. Those sites belong to this category the height of whose tells exceeds 20 m. The reason for this limit is that during the excavations of Grd-i Tle we concluded that the steep slope of the high tell has been kept together by the consecutive walls of the successive historical periods. So there is a high probability that a high tell was a walled town in certain periods – inevitably in the Neo-Assyrian Period, when the population density and land use were at a peak and the building of defence works – as the Neo-Assyrian royal inscriptions prove– was a

[22] Fuchs 1994, lines 139-141.

common and widespread phenomenon. These sites constituted the group of walled towns (*see* Map). Consequently we suppose that the following tells were walled towns during the Neo-Assyrian period: Grd-i Tle, Serkhomah, Grd-i Gulak, Shemshara, Basmusian, Qarashina, Qaralla South, Araban, Kullah.

2) The second level of this system consists of those sites the known diameter of which was more than 200 m. In these cases there were not necessarily walls around the settlement, but in some cases the probability of there having been walls is high (especially if there is a smaller (than 20 m) but commanding tell in the site). These sites (*see* Map) constituted the group of towns (without walls).
3) The third level incorporates those smaller sites which were villages or townlets (*see* Map). The size of these sites makes it clear that they were subordinates of the larger sites and occupied the lowest position in the settlement hierarchy and administration of the region and the Assyrian Empire.
4) The fourth level consists of small forts, which were parts of the Assyriana defence and monitoring/controlling system – especially in the border regions of the Empire. One excavated site, Usu Aska, and two presumtive sites (Panka Lawaz and Gawr Qalat) would belong to this group of sites.

This system provides an approach with the help of which we can examine the Neo-Assyrian (Iron Age) sites of the Rania Plain as if there were only a single, universal settlement hierarchy observed in the plain. In fact, however, several local hierarchies might have existed parallelly within the confines of the mountain ranges that bordered the plain. At least three types of settlement hierarchies can be reconstructed, which ultimately made up the universal hierarchy of the plaIn:

1) 'Basic' hierarchy: almost all of the larger sites have their satellite sites in their inmediate vicinity. These smaller satellite sites were in almost all cases not independent settlements; instead, the main site 'outsourced' some agricultural or industrial profiles the practice of which would have been much safer or more confortable outside of the walls of the town (as for example the blacksmith's forge in Grd-i Tle).
2) Local hierarchy: according to the archaeological and the Assyrian historical logic, there might have been semi-independent regions (such as walled towns with other villages in their vicinity) in the Rania Plain. These local networks with their local settlement hierarchies formed the elements of the higher-level hierarchy encompassing the whole Rania Plain.
3) Regional hierarchy: this might have been the highest level of hierarchy in the Rania Plain – if it were an independent ecosystem and political entity preceeding the Assyrian conquests and after that. If it was an independent political entity, the primary centre of which ruled the whole plain, this centre would have ruled these local hierarchies and formed a higher level in a regional hierarchy.

The final goals of the project

The final goal of this project is to get a somewhat more reliable picture of how the administration of the Assyrian Empire worked. We would like to reconstruct:

1) The nature of the Assyrian occupation. Did the Assyrians only conquer the region and rule it for around 260 years, without changing the basic cultural landscape of the Rania Plain?
2) The extent to which the Assyrian occupation changed the material culture of the region (for example, the ratio of Assyrian and local Iron Age pottery in the records, the Assyrian imprint in the architecture, etc.).

3) What effect Assyrian rule had on the economy, population density, and settlement pattern of the region.
4) How the newly reconstructed settlement hierarchy reflected the logic of the Assyrian administration of the region.

Thus, we would like to reconstruct the nature and the extent of Assyrian political, economic, and military control and its imprint on the archaeological record. The current study, however, makes only a preliminary attempt to reconstruct from this preliminary and approximate list of topics the settlement pattern, settlement hierarchy, and pattern of the Assyrian military presence.

Obviously, final answers will only be returned and a final picture of the Neo-Assyrian Rania Plain drawn if we can excavate as many sites as possible to reveal the real nature of this occupation through the lens of the archaeological record. Till that ideal-typical stage, we can use only those tools and ideas, from which only a rough and preliminary picture would emerge.

	Name	Period			Size				Location	Reference
		PH	BA	NA	D	L	W	H		
1	Grd-i Tle				200	200	97	31	31 m high tell	Dezső et al. 2016, 2017.
2	Poke Saru (Upper)			+					Assyrian military camp?	Giraud 2013B, Fig. 14, no. 112
3	Poke Kwaru (Lower)			+?						Giraud 2013B, Fig. 14, no. 116
4	Swesha		?						Large open site situated on the high natural hill above the Betawata Valley. The site is rich in material. A large amount of stone shows some buildings or terraces	Giraud 2013B, 138
5	Qalat Tell		+	+					Small tell in Saruchawa village	Giraud 2013B, 27
6	Kani Maran 1									Giraud 2013B, 27
7	Kani Maran 2									Giraud 2013B, 27
8	Serkhomah	+		+	200/100			20	Large mound in Baslan Valley	Abu al-Souf 1970, no. 28
9	Salkis		?						Tell situated on the Rania Plain near the site n°18-Kolaga. Large, oblong (5–6 m high), with a large lower town surrounding it on the north	Giraud 2013A, 33, no. 19; Giraud 2013B, 137
10	Kolaga	+		+					Small site on Lake Dukan on a terrace of an affluent of Zab river	Giraud 2012, 17, Fig. 12; Giraud 2013A, 33, no. 18; Giraud 2013B, 18
11	Waranga Saru		+	+					Very large tell, a low mound on the bank of Lake Dukan	Giraud 2012, 42, Fig. 45; Giraud 2013A, 33, no. 15; Giraud 2013B, 15
12	Ibrahim Katshal									Giraud 2013A, 33, no. 13
13	Grd-i Gulak	+	+	+						Giraud 2013A, 33, no. 17; Giraud 2013B, 17
14	Shemshara (Shusharra)	+		+	50/20			25	Three conical mounds	1956, no. 15; Eidem 2011, 13-19; Eidem 2012, 2-11; Giraud 2013B, 90; Eidem 2013–2014, 2-9
15	Qalat Rania	+	+	+						Giraud 2013B, 59
16	Buskain	+		+	200			15	Large mound	1956, no. 29
17	Malan Grdi									Giraud 2013B, 6
18	Golak									Giraud 2013B, 4
19	Qalat Ga Darband		+	+						Giraud 2013B, 36
20	Usu Aska			+					Rectangular Assyrian fort in the pass	British Museum
21	Mwrad Rasu	+	+	+						Giraud 2013B, 72

	Name	Period			Size				Location	Reference
		PH	BA	NA	D	L	W	H		
22	Kullak	+		+	100			8	Hemispherical mound	Abu Al-Souf 1970, no. 16
23	Parah Post	+		+		200	70	3	Two small mounds	Abu Al-Souf 1970, no. 17; Giraud 2013B, 107
24	Mamand	+		+	150			5	Large mound	Abu Al-Souf 1970, no. 13; Giraud 2013B, 108
25	Basmusian (Pakute)	+	+	+	1.500			23	Large mound	Abu Al-Souf 1970, no. 18; Giraud 2013B, 101; Eidem 2016, 2-13
26	Babu Gawran 1	+		+	200			8	Two mounds 300 m apart	Abu Al-Souf 1970, no. 12
26	Babu Gawran 2	+		+					Two mounds 300 m apart	Abu Al-Souf 1970, no. 12
27	Kullan	+		+		150	100	10	Large mound	Abu Al-Souf 1970, no. 30
28	Kundu	+	+	+	300			12	Hemispherical mound	Abu Al-Souf1970, no. 32; Giraud 2013B, 104
29	Quralla North	+		+		200	50	10	Ovoid mound	Abu Al-Souf 1970, no. 33
30	Quralla South	+		+		250	100	20	Large ovoid mound	Abu Al-Souf 1970, no. 34
31	Baiz Agha		MA	+					Large structure with a central courtyard and surrounding rooms. The photos also show traces of mud brick walls below the stone foundations, and thus from an even older level, and again of a fairly substantial structure	Eidem 2015, 7
32	Haiz	+		+	150			15	Large mound	Abu Al-Souf 1970, no. 11; Giraud 2013B, 105
33	Mullah Shell North	+		+	150				Mounds on a high cliff, overlooking Zab on its eastern bank	Abu Al-Souf 1970, no. 10
34	Mullah Shell South	+		+	200				Mounds on a high cliff, overlooking Zab on its eastern bank	Abu Al-Souf 1970, no. 10
35	Malachal	+	+	+						Giraud 2013B, 5
36	Qarashina	+		+	70			20	—	Abu Al-Souf 1970, no. 19; Giraud 2013B, 100
37	Araban			+?		250		20	8 ha – large flat site from the 4th millennuim B.C. on the eastern bank/shore of the Zab River/Dukan Lake (under water)	Abu Al-Souf 1970, no. 37; Giraud 2013B, 110; Eidem 2013–2014, 9; Eidem 2015, 7-11
38	Kamam	+		+		250		15	Large hemispherical mound on hill	Abu Al-Souf 1970, no. 31

	Name	Period			Size				Location	Reference
		PH	BA	NA	D	L	W	H		
39	Newdasht 3		?						Small tell situated on Nawdasht Plain. Oblong shaped with relatively steep slope. Small lower extension surrounding the tell on each side. Lot of remaining building stones on top and slope	Giraud 2013B, 163
40	Kawlan 1		?						Large open area site on the south shore of the Zab river, on a high alluvial terrace. Some remaining building stones on the eas along the river. A truck destroyed a art of the site. Good density of pottery sherds	Giraud 2013B, 158
41	Panka Lawaz		?						In the foothills of the southern Merga Mountains, a large rectangular building lying, overlooking the Zab River. Built with large stones	Giraud 2013B, 161
42	Qara Tepe Kun	+	+	+		300		15	Large mound in Qara Tepe village	Abu Al-Souf 1970, no. 38
43	Kamarian	+	+	+	70			12	conical mound	Abu Al-Souf 1970, no. 3; Giraud 2013B, 99
44	Mullah Umar		+	+	200			5	on the Western bank of Zab	Abu Al-Souf 1970, no. 2
45	Kirdi Bur 1	+	+	+	500			3	Along a seasonal stream	Abu Al-Souf 1970, no. 1
45	Kirdi Bur 2	+	+	+	100			4	Along a seasonal stream	Abu Al-Souf 1970, no. 1
46	Butan	+	+	+		150	70	7	Large elongated mound, beside the Eastern bank of the Zab	Abu Al-Souf 1970, no. 4
47	Ed-Dem	+	+	+	70			12	Hemispherical mound	Abu Al-Souf 1970, no. 5; Giraud 2013B, 98
48	Azmira Bardashan			+						Giraud 2013B, 43
49	Sofian Kawlan			+						Giraud 2013B, 44
50	Qabr es-Sahabah	+		+	—	—	—	—	—	Abu Al-Souf 1970, no. 40
51	Kullah		+	+	100/70			20	Ovoid mound on eastern terrace of Zab	Abu Al-Souf 1970, no. 6; Giraud 2013B, 84
52	Tankija	+		+		150	100	3	Mound on hill	Abu Al-Souf 1970, no. 7; Giraud 2013B, 89
53	Kullah Kawi	+	+	+		200	70	7	Elongated (west–east) mound in the Si-Najian valley	Abu Al-Souf 1970, no. 8
54	Qara Qaj			+		250	100		Large low mound south of Kullah Kawi	Abu Al-Souf 1970, no. 9; Giraud 2013B, 69

	Name	Period			Size				Location	Reference
		PH	BA	NA	D	L	W	H		
55	Gawr Qalat								The site lies between two rocky crests. Two stone walls protect the site between the two crests. These fortifications are made of large, squared stones (Fig. 58), built without any filling. Inside the building, several architectural remains can be distinguished. The type of walls and the absence of artifacts do not permit us to date it, but it could be quite recent (late medieval?). The function of the site was likely to control the road leading to the Rania plain	Giraud 2012, no. 1, p. 44
56	Bari Harmeyan 1		?						Small tell lying in the foothills of the Merga Mountains. Oval-shaped, the lower town extends to the southwest and south (site 170) on the other side of the road. The material density is well. Site 170 is probably the low town of site 169, but we recorded it as a new site before establishing their relative dates	Giraud 2013B, 169
56	Bari Harmeyan 2		?							Giraud 2013B, 170

	Name	Period			Size				Location	Reference
		PH	BA	NA	D	L	W	H		
17	Tepe Gawran 1			+		150	50		Traces of an Assyrian building with baked bricks on its summit	Abu Al-Souf 1970, no. 14
18	Tepe Gawran 2			+		250		3	Traces of an Assyrian building with baked bricks on its summit	Abu Al-Souf 1970, no. 14
31	Mahmud Habhas			+		200		10	Large mound	Abu Al-Souf 1970, no. 35
32	Ghaznah			+		200		21	Large mound	Abu Al-Souf 1970, no. 36
35	Kirdel	+		+		200		10	Mound near Merzah Rustam	Abu Al-Souf 1970, no. 39

Bibliography

Abu Al-Souf 1970	Abu Al-Souf, B., "Mounds in the Rania Plain and excavations at Tell Basmusian, 1956", *Sumer* 26 (1970), 65–104.
Giraud 2012	Giraud, J., *Archaeological Map of the Soulaimaniah Governorate. First preliminary report on the survey in Rania District, 24 April 2012–27 April 2012; 8 June 2012 – 8 July 2012*, 1–56.
Giraud 2013A	Giraud, J., *Mission Archéologique Française du Gouvernorat de Soulaimaniah - Saison 2013. Territorial dynamics in Northern Mesopotamia from Palaeolithic to modern times. Report on the Spring Mission 28 February–15 March 2013*, 1–44.
Giraud 2013B	Giraud, J., *Mission Archéologique Française du Gouvernorat de Soulaimaniah. Territorial dynamics in Northern Mesopotamia from Palaeolithic to modern times. Preliminary Report on the 2013 autumn Mission Third MA-FGS Mission 15 October – 30 November 2013*, 1–57.
Dezső 2012	Dezső, T., *The Assyrian Army. I: The Structure of the Assyrian Army as Reconstructed from the Assyrian Palace Reliefs and Cuneiform Sources. 1. Infantry,* (Antiqua et Orientalia, 2; Assyriologia 8/1), Budapest, 2012.
Dezső 2016	Dezső, T., *The Assyrian Army. II: Recruitment and Logistics*, (Antiqua et Orientalia 6; Assyriologia 9), Budapest, 2016.
Dezső – Kalla et al. 2016	Dezső, T. – Kalla, G. – Mordovin, M. – Masek, Zs. – Szabó, N. – Ismail, B. B. – Rasheed, K. – Weisz, A. – Sándor, L. – Khwsnaw, A. – Amin, A. A. H., "Grd-i Tle 2016. Preliminary Report of the Hungarian Archaeological Mission of the Eötvös Loránd University to Grd-i Tle (Saruchawa) in Iraqi Kurdistan", *Dissertationes Archaeologicae ex Instituto Archaeologico Universitatis de Rolando Eötvös nominatae* Ser. 3 No. 4 (2016), 233–240.
Dezső – Kalla et al. 2017	Dezső T. – Kalla G. – Ismail, B. B. – Bödőcs, A. – Fülöp, K. – Király, A. – Khwsnaw, A. – Szabó, N. – Németh, V. – Németh, F. A. – Amin, A. A. H., "Preliminary Report on the Hungarian Archaeological Mission (Eötvös Loránd University) at Grd-i Tle (Saruchawa) in Iraq: Second Season (2017)", *Dissertationes Archaeologicae ex Instituto Archaeologico Universitatis de Rolando Eötvös nominatae* Ser. 3 No. 5 (2017), 361–392.
Dezső – Mordovin 2016	Dezső, T. – Mordovin, M., "The first season of the excavation of Grd-i Tle. The Fortifications of Grd-i Tle (Field 1)", *Dissertationes Archaeologicae ex Instituto Archaeologico Universitatis de Rolando Eötvös nominatae* Ser. 3, No. 4 (2016), 241–262.
Eidem 2011	Eidem, J., „Dokan. An archaeological salvage project in Iraq, 1956-60", *Annual Report NINO & NIT* 2011, 13–19.
Eidem 2012	Eidem, J., "Back to Rania", *Annual Report NINO & NIT* 2012, 2–11.
Eidem 2013–2014	Eidem, J., The NINO Archaeological Project on the Rania Plain 2013-2014, *Annual Report NINO & NIT* 2013–2014, 2–9.
Eidem 2015	Eidem, J., "Dams and damage. Heritage loss and second phase salvage on the Rania Plain (Kurdish Region of Iraq)", *Annual Report NINO & NIT* 2015, 2–13.

Eidem 2016	Eidem, J., "Pakute, a Middle Assyrian fortress on the Rania Plain", *Annual Report NINO & NIT* 2016.
Eidem 2017	Eidem, J., ed., *ZAGROS. Proceedings of the NINO Jubilee Conference 2014 and other studies*, PIHANS 130 (= ZaSt 1), Leiden, 2017.
Fuchs 1994	Fuchs, A., *Die Inschriften Sargons II. aus Khorsabad*, Göttingen, 1994.
Grayson 1991	Grayson, A. K., *Assyrian Rulers of the Early First Millennium B.C. I (1114–859 BC)*, (The Royal Inscriptions of Mesopotamia, Assyrian Periods, 2), Toronto, 1991.
Kalla – Dezső 2019	Kalla, G. – Dezső, T., "Hungarian Archaeological Expedition in the Mountains of Iraqi Kurdistan. Excavations undertaken by the Faculty of Humanities", Eötvös Loránd University at Grdi Tle (Rania Plain). *Hungarian Archaeology. E-Journal* 8/4 (2019) 1–12.
Lanfranchi – Parpola 1990	Lanfranchi, G. B. – Parpola, S., eds., *The Correspondence of Sargon II, Part II: Letters from the Northern and Northeastern Provinces*, (State Archives of Assyria, V), Helsinki, 1990.
Postgate 2000	Postgate, J.N., "The Assyrian Army in Zamua", *Iraq* 62 (2000), 89–108.
Rania Plain Survey	Rania PlaIn: Survey (http://www.nino-leiden.nl/projects/rania-plain-survey)
Saggs 2001	Saggs, H. W. F., *The Nimrud Letters, 1952*, (Cuneiform Texts from Nimrud, 5), London, 2001.

Fig. 2: Grd-i Tle from the North

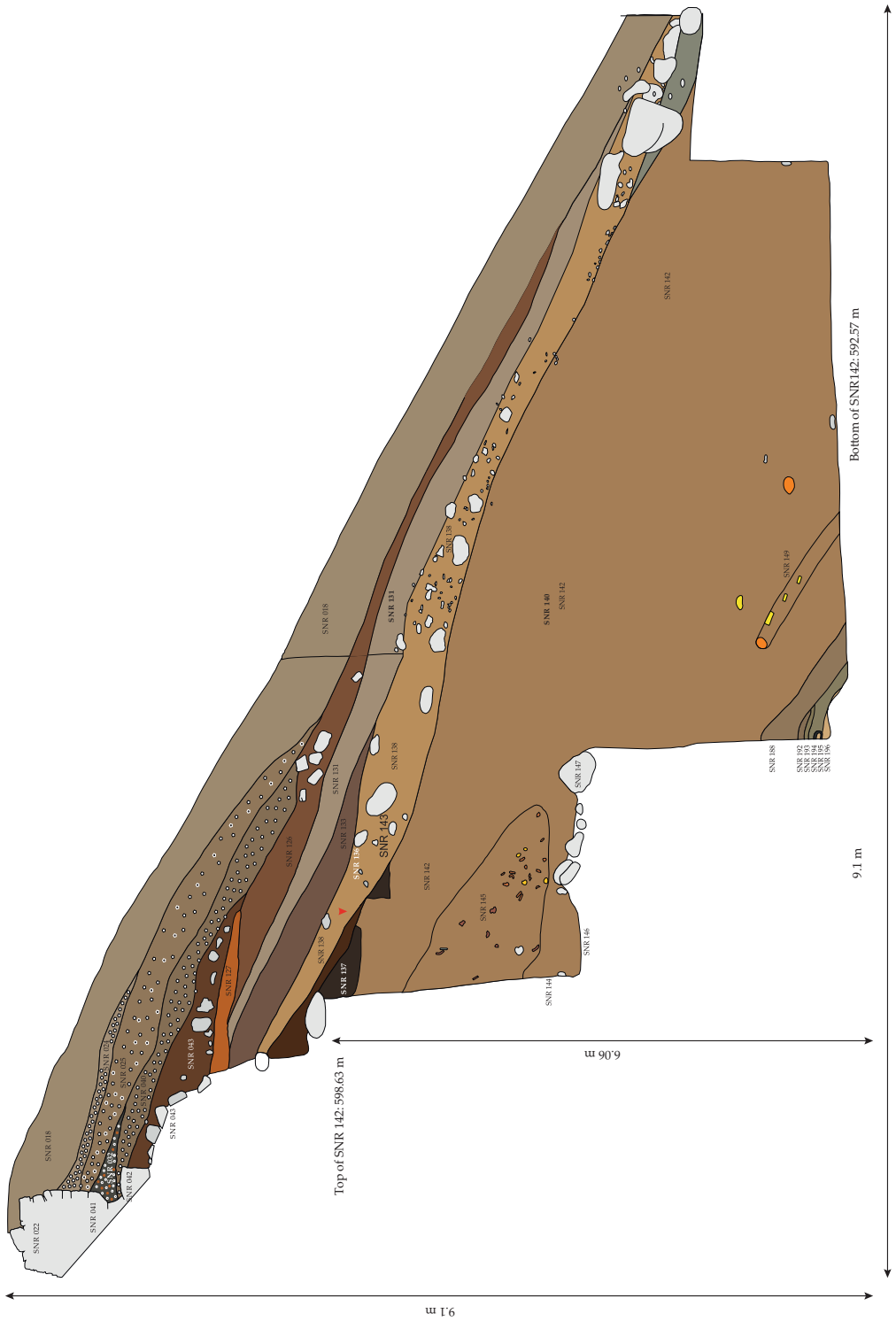

Fig. 3: Section of the Western wall of trench 1A of Field 01 of Grd-i Tle

Fig. 4: Section of the Southern wall of trench 1A of Field 01 of Grd-i Tle

Fig. 5: Signs of a conflagration: mudbrick building and a collapsed roof

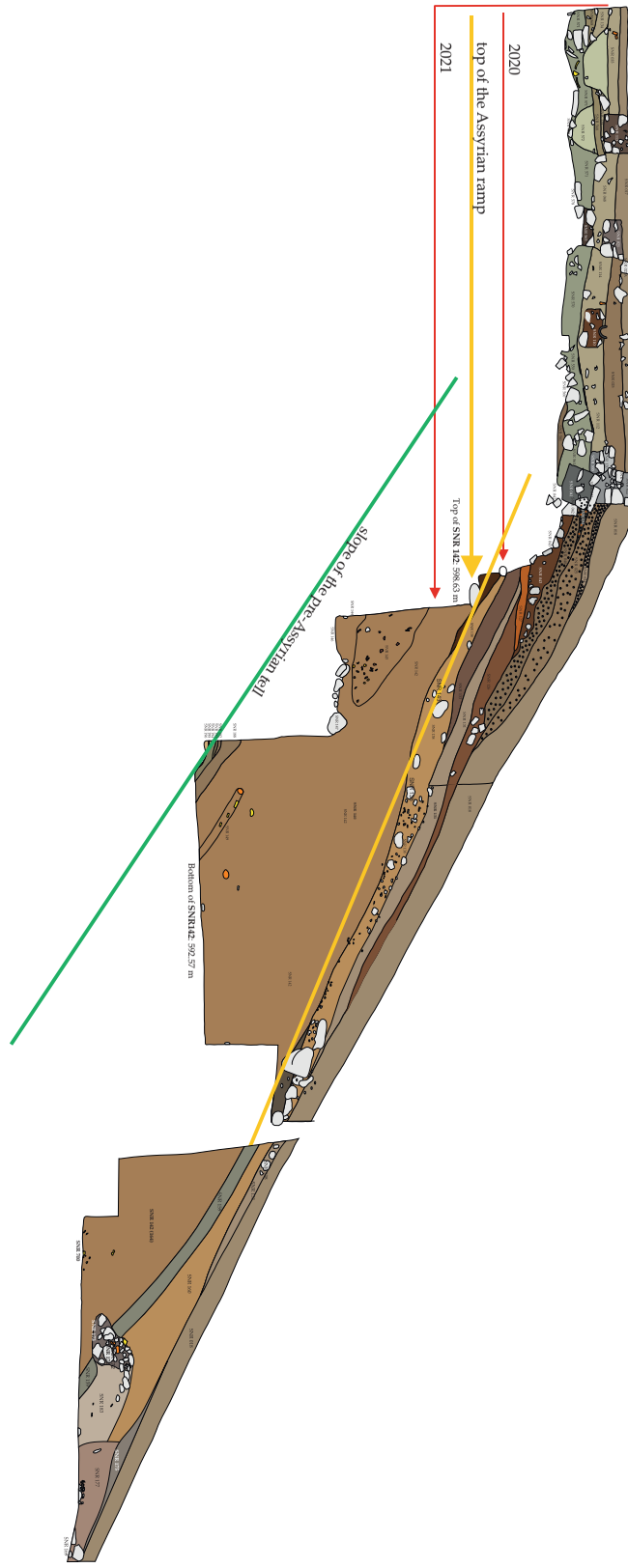

Fig. 6: Section of the Western wall of trenches of Field 01 of Grd-i Tle

Fig. 7: Terraced buildings from the Neo-Assyrian period

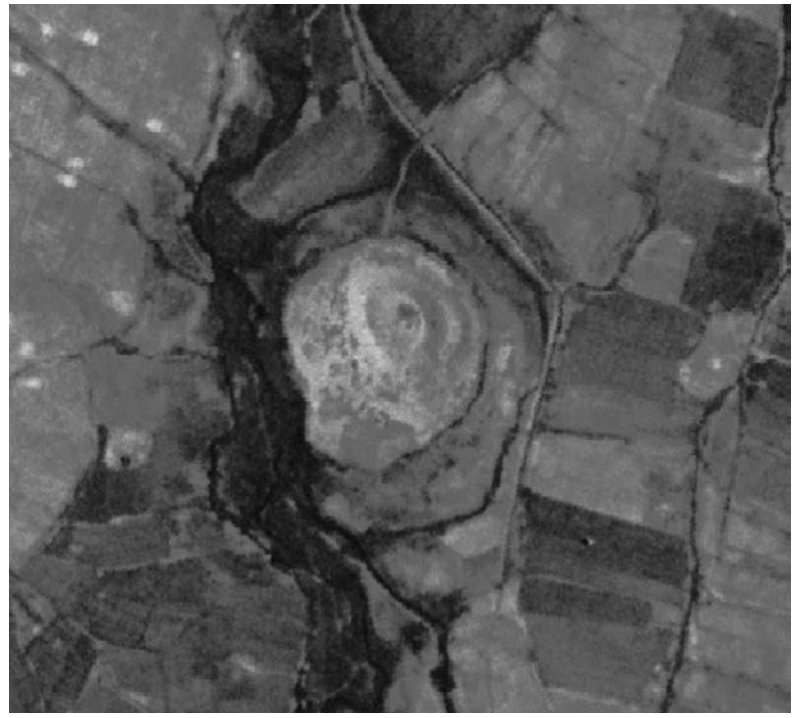

Fig. 4: Corona satellite image of the surroundings of Grd-i Tle

Fig. 5: Google satellite image of the surroundings of Grd-i Tle

Fig. 6: Reconstruction of the features of Grd-i Tle

Fig. 7: Corona satellite image of the surroundings of Grd-i Tle and Upper Puka

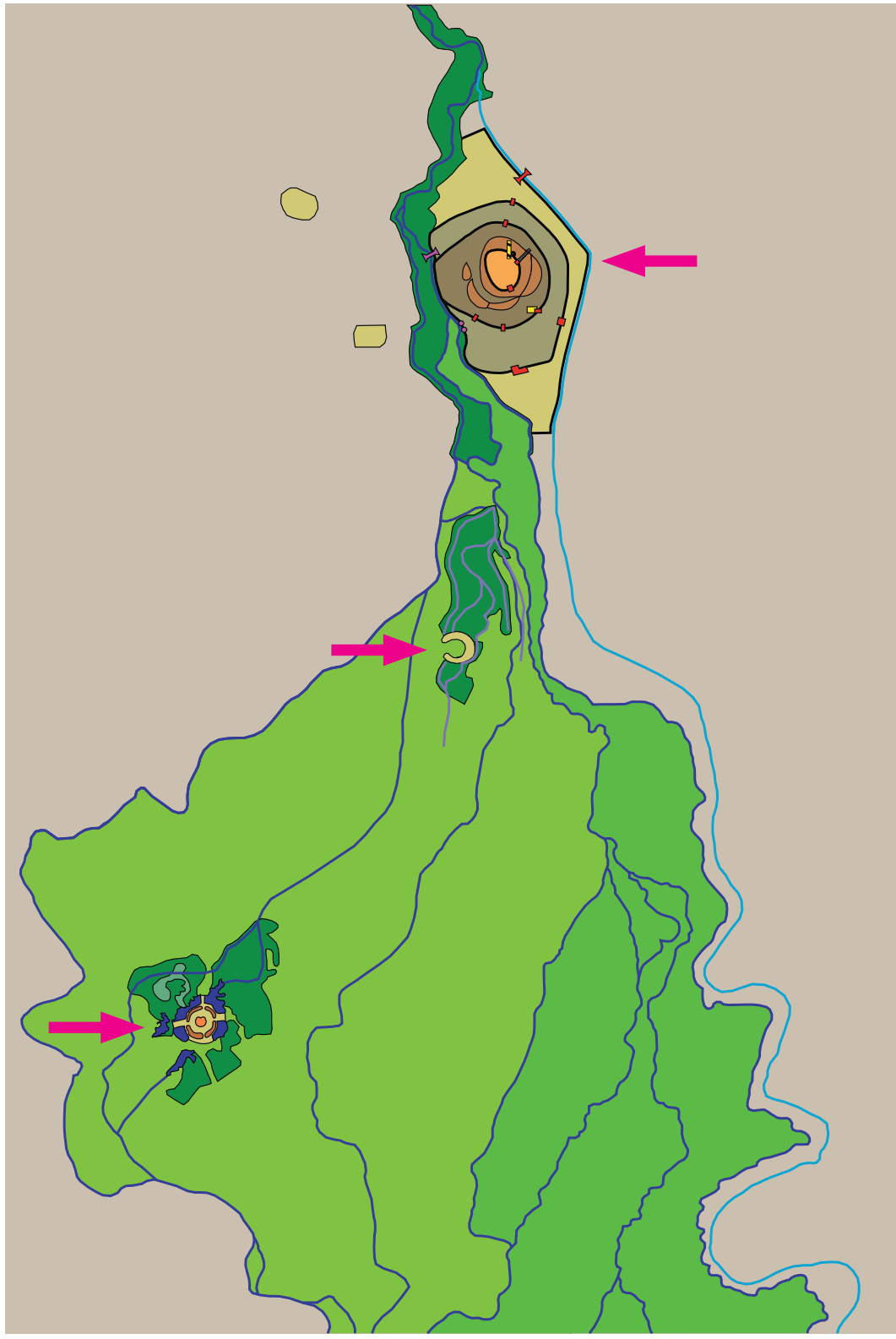

Fig. 8: Reconstruction of the satellite sites of Grd-i Tle

Fig. 9: Corona satellite image of a possible satellite site of Grd-i Tle (44.7550; 36.2464)

Fig. 10: Corona satellite image of Upper Puka (Poke Kwaru) on the Rania Plain (44.7478; 36.2374)

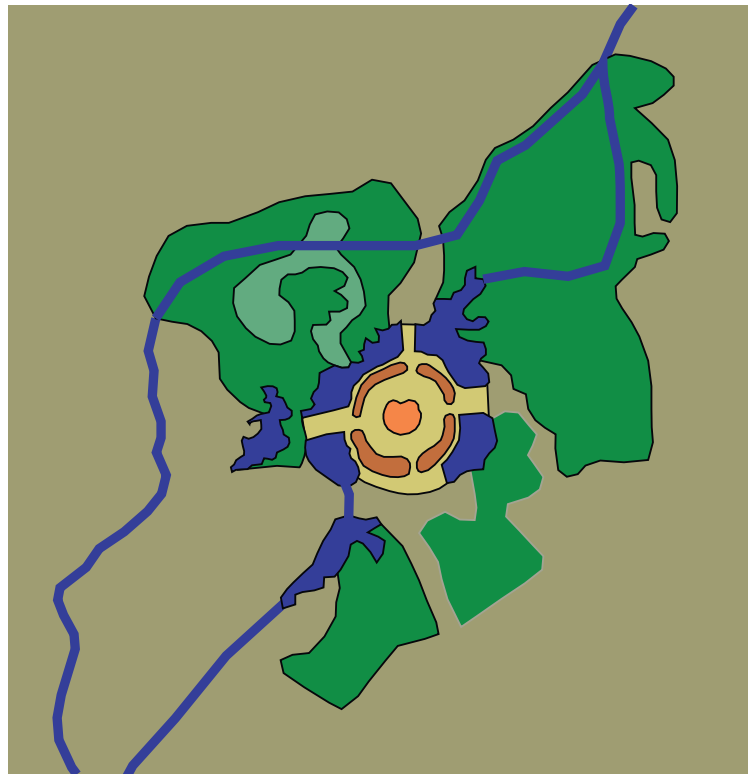

Fig. 11: Reconstruction of the features of Upper Puka

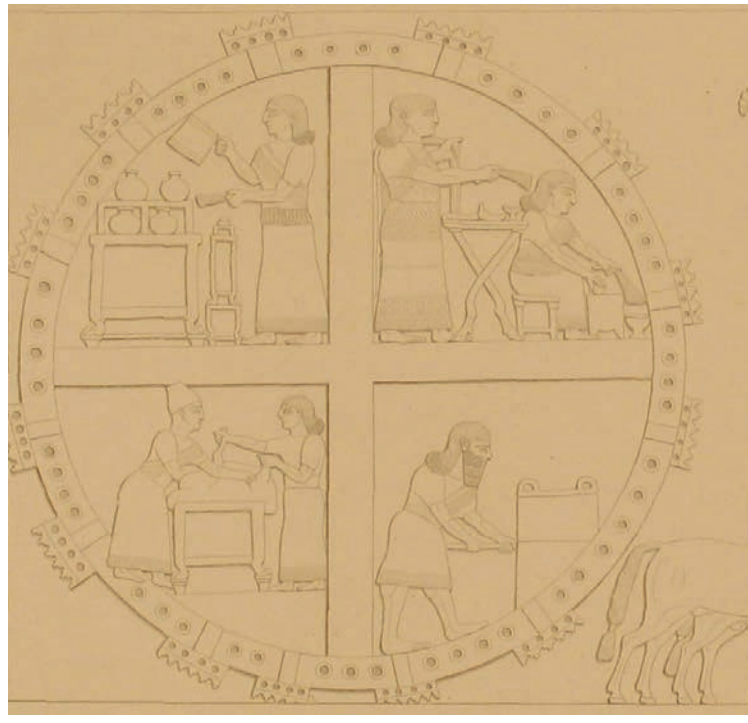

Fig. 12: Assyrian military camp, Ashurnasirpal II (883—859 B.C. Layard 1853, pl. 30)

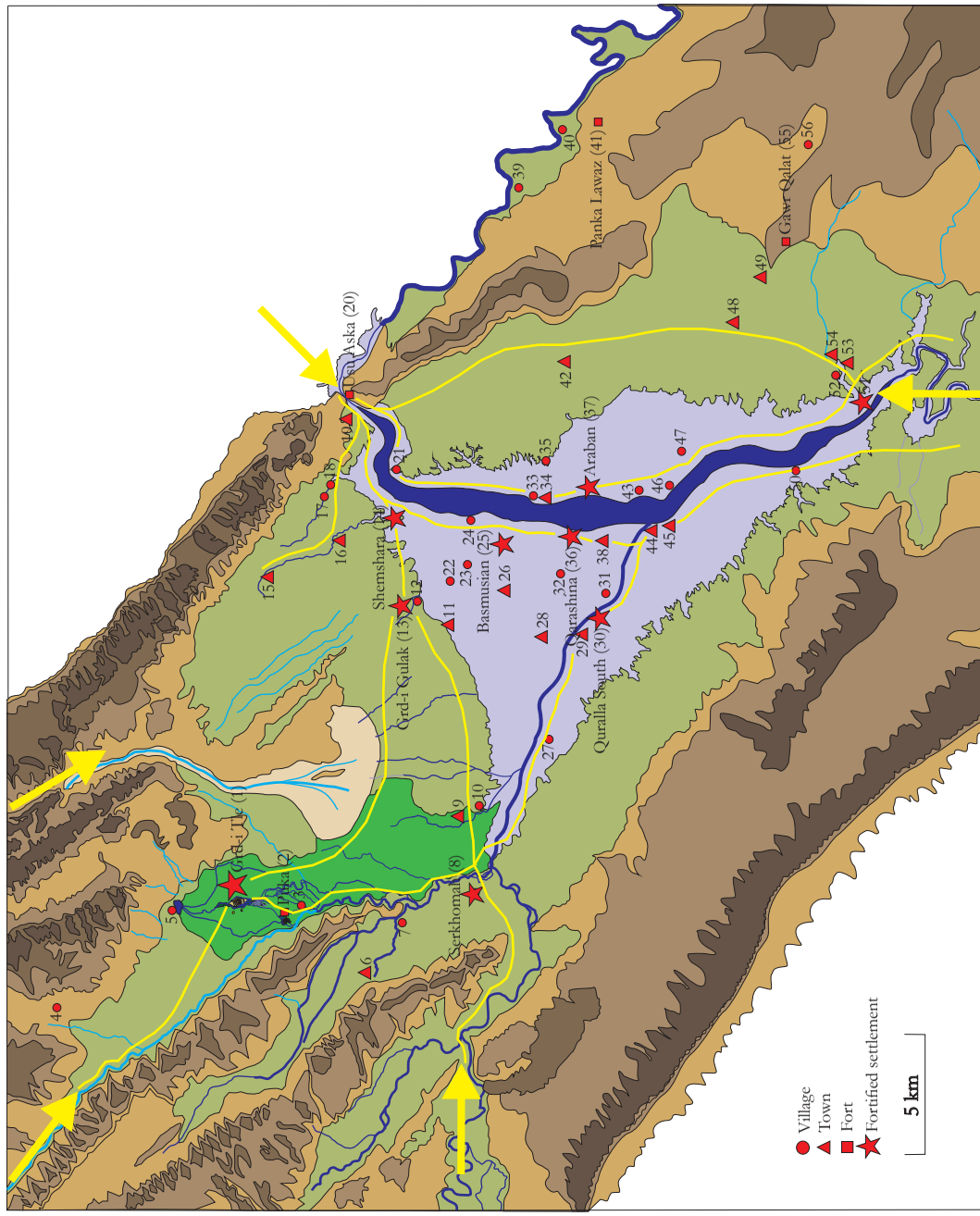

Fig. 14: A reconstruction of the settlement hierarchy of the Rania Plain in the Neo-Assyrian period

The Neo-Assyrian occupation of the tell settlement at Grd-i Tle in Iraqi Kurdistan

Gábor Kalla

Settlement and small finds

The excavation of the large tell settlement of Grd-i Tle by the Hungarian Archaeological Mission in Iraqi Kurdistan led by Tamás Dezső and Gábor Kalla (Eötvös Loránd University, Budapest) started in 2016.[1] The main goal of the fieldwork was to investigate a local Neo-Assyrian administrative centre on the northern frontier of the empire.[2] The selection of the site was influenced by the fact that the larger amount of pottery on the surface of the Grd-i Tle site indicated that it was intensely occupied in the Neo-Assyrian period, while its shape suggested a fortified settlement dominating the north-western part of the Rania Plain *(Fig. 1)*. In order to confirm this, our only option was to excavate the steep-sided tell, which is covered by a thick sequence of deposits from later periods. Much of the fieldwork in the first two seasons was devoted to clarifying the site's topography and stratigraphy.[3]

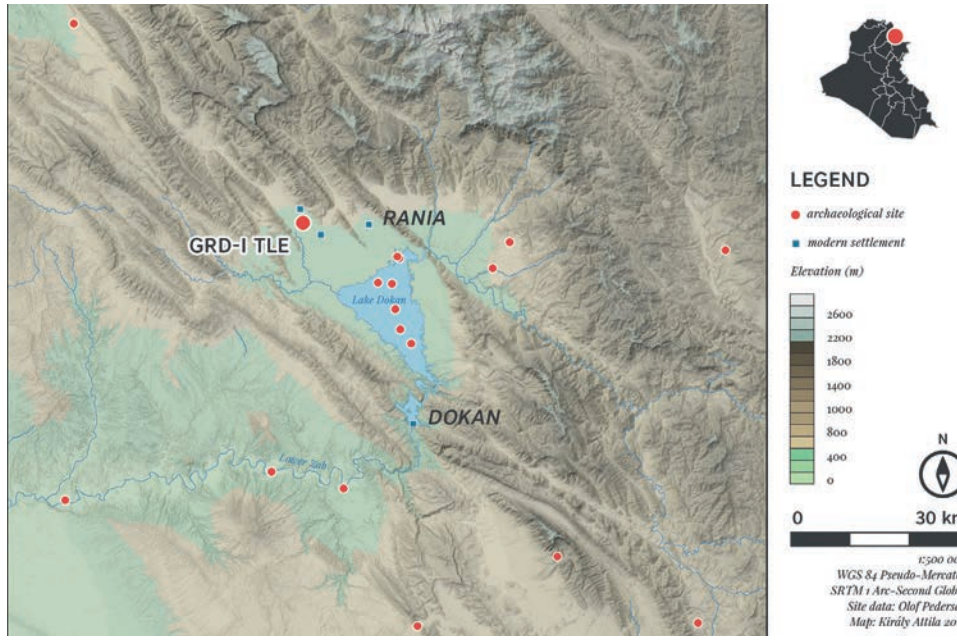

Fig. 1. The location of Grd-i Tle on the Rania Plain.

[1] The assessment of the find material was supported by a grant from the National Research, Development and Innovation Office (NKFIH, Hungary), grant number K-132429 ("Intensive archaeological investigation of a local administrative centre of the Neo-Assyrian Empire").

[2] For an overview, see Dezső, in this volume.

[3] For an overview of the work of the first four seasons, see Kalla – Dezső 2019.

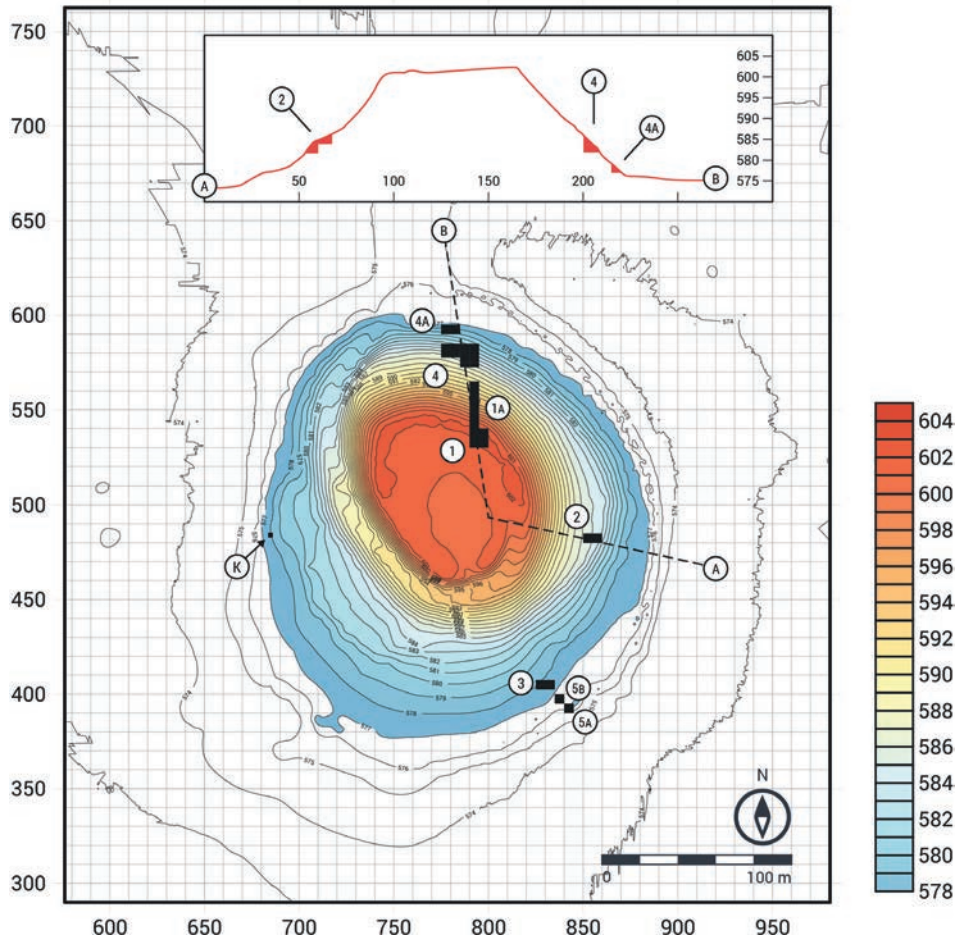

Fig. 2. Contour map of the Grd-i Tle site with the excavated areas.

Topography and stratigraphy

The upper plateau of the tell, now about 30 m high, is oval in shape and measures 76x86 m. The tell has very steep sides and a base diameter of about 200 m. On the side of the hill, at a height of about 10 m, a 10–12 m wide outer plateau runs around the perimeter; the western side was destroyed during the construction of the modern access road *(Fig. 2, 3)*.

Today, the hill is surrounded by an irregular circular stone structure about 400 m in diameter on three sides (north, east and south), probably the remains of a former city wall, which was retained for constructing a canal. As the canal is in use, it cannot be excavated, so we can at best only assume that the Assyrian city wall had run somewhere in this area. The few sherds recovered here indicate that the area beyond this assumed town wall was quite certainly inhabited in the Hellenistic-Parthian period, but there is no evidence yet that the Neo-Assyrian settlement had extended to this area. In 2017, a large pivot stone was found in a heap of earth piled up by a mechanical excavator west of the hill, which may have originated from the western city gate of the Hellenistic-Parthian period. The structure itself, however, has probably been dismantled since.[4]

[4] Dezső, Kalla et al. 2017, 390, Fig. 23.

Fig. 3. Drone photo taken during the 2019 excavation season showing the location of the trenches. Trench 4/A, excavated in 2018, was not reopened during the 2019 season.

Islamic period

The uppermost architectural layer of the upper plateau is a fortified castle of late Islamic date, protected by semi-circular bastions. It dates back to the eighteenth and nineteenth centuries and was razed to the ground sometime in the mid-nineteenth century, probably when control over the semi-independent Kurdish Emirate of Soran was regained by the Ottoman Empire in 1835. There were clear signs of a siege and deliberate destruction, such as large quantities of lead shells and the remains of a collapsed fortification wall covering the hilltop.[5] The settlement associated with the castle lay on the southern plateau of the tell and the areas to its south. This area remained in use by the local population until the mid-twentieth century.

A Muslim cemetery, densely packed with tombs, was opened on the lower plateau on the eastern side of the hill and below.[6] The remains of stone cist tombs can still be seen on the surface. This cemetery also extends to the north, but the graves in that area are less densely spaced. The burials predate the upper castle by long, with radiocarbon dates indicating two periods of use, the twelfth and the sixteenth centuries.

[5] Dezső – Mordovin 2016; Masek – Mordovin 2016.
[6] Kalla – Szabó 2016.

Fig. 4. The Macedonian silver tetradrachm found in Trench 2 among the Islamic graves in 2016. It was minted in Lampsacus between 310–301 BCE.

Hellenistic–Parthian period

Below the various Islamic period layers, the entire hill is covered by a 2–4 m thick Hellenistic-Parthian deposit, underneath which lie the Neo-Assyrian building levels. Only at the foot of the hill, below an altitude of 8–10 m, do Assyrian remains appear directly under the surface, probably due to erosion and the fact that this area is no longer covered by the debris of the successive upper fortifications.

The earliest Hellenistic buildings were all built directly on the Assyrian ruins, often using their materials, and sometimes even following the lines of the earlier walls. The beginning of this period is basically dated by two Hellenistic coins, one of which was minted between 310 and 301 BCE in Lampsacus *(Fig. 4)*.[7] Next, during a subsequent long period of accumulation, leaving deposits as much as 2 m thick, traces of intensive industrial activity were noted across the middle part of the tell, with the remains of industrial kilns and large amounts of iron and glass slag. This was followed by one, or in some areas, two building periods. All the walls had a foundation of unworked blocks, cobbles, rubble and brick fragments laid in mud, and were generally constructed with the rubble-filled double-wall technique; the mud brick superstructure has not survived in either case.

During the excavation of the upper plateau in 2019, a 4 m wide foundation of the wall (SNR 578) of the Hellenistic-Parthian fortress was uncovered at a depth of 2 m in Trench 1[8] *(Fig. 5)*. It is assumed that the Assyrian fortress wall lies hidden underneath.

We cannot yet date the end of this long period, but it most likely coincides with the end of the Parthian period, and a few Sasanian sherds suggest that it may even have survived into the Early Sasanian period. The Mediterranean influence on the cultural features is amply illustrated by the tegulae, which are unique to this period. Curiously enough, no imported western ceramics have been found so far. The pottery tradition is local, with a very high proportion of hand-thrown, crudely formed vessels.

[7] Kalla – Dezső 2019, 5, Fig. 6.
[8] Trench 1 was supervised by Fruzsina Németh

Fig. 5. A 4 m wide stone foundation (SNR 578) of the Hellenistic-Parthian fortress wall of the citadel in Trench 1 (790/530 NW/SW). The sloping surface was reinforced by a revetment to the north (left of the image).

The earlier Hellenistic-Parthian strata are particularly important for the Assyrian presence because many Assyrian artefacts have been recovered from this secondary context.

Early Periods

We have little information about the pre-Assyrian occupation periods, mostly only unstratified finds. An Early Bronze Age layer has already been excavated at the bottom of Trench 1/A cut into the northern face of the hill at a depth of 7 m, but unstratified finds also indicate a Middle and incipient Late Bronze Age presence (e.g. Khabur Ware). Stoneware and a bevelled rim bowl suggest that the site was also occupied in the Uruk period, and a large number of painted Ubaid and Halaf pottery sherds and knapped lithics, especially the large quantities of obsidian tools, suggest a Chalcolithic occupation.[9]

Neo-Assyrian buildings and features

Due to the thick later layers, the Assyrian settlement could only be reached in small areas. Until 2019, Assyrian walls were excavated in four different areas, in Trenches 1/A, 2, 4 and 4/A.

[9] For the knapped stone artefacts, see Király 2017.

Trench 1/A[10]

The original purpose of the 25 m long Trench 1/A, opened on the north side of the hill, was to clarify the stratigraphic conditions; however, already during the 2016 and 2017 seasons, it became clear that thick layers of rubble from the fortifications of the upper plateau lay underneath the surface in successive layers.[11] During the deepening of the trench's southern part in 2018 and 2019 (790/540 NW, 790/550 SW), we found that the very homogeneous reddish clayey fill SNR 142, which had already been encountered in 2017, continues downward and is more than 6 m thick in some places. It is most probably an earthen ramp, a glacis, built to protect the upper Assyrian fortress.[12] Several retaining walls were needed to hold the steep glacis earth,[13] and an upper one has been identified 4 m below the present surface of the plateau. The stone foundation (SNR 147) is 1 m wide and follows the line of the upper retaining walls in an east-west direction, running parallel to them (Fig. 6). The next retaining wall may have been roughly 4 m lower about 13 m to the north, beneath the Hellenistic-Parthian wall excavated in 2019 (SNR 172, 790/560 SW).

This confirms that a fortress probably occupied the top of the hill in the Neo-Assyrian period, at about 27 m above the former surface. The remains of its outer wall probably lie beneath the 4 m thick foundation of a Hellenistic-Parthian wall (SNR 578, *Fig. 5*) made of large stone blocks excavated in Trench 1 in 2019 (790/530 NW/SW).

Fig. 6. A 1 m wide retaining wall foundation (SNR 147) excavated in Trench 1/A, 4 m below the level of the upper plateau.

[10] Trench 1/A was supervised by Tamás Dezső and Kristóf Fülöp.
[11] Dezső – Mordovin 2016; Dezső, Kalla et al. 2017, 364–371.
[12] See Dezső, in this volume.
[13] Similar constructions are known for the earth ramparts of the Urartian fortresses, with retaining walls forming up to three concentric circles (van Loon 1966, 38).

Trench 2[14]

The Neo-Assyrian layers were reached for the first time in 2018 on the eastern side of the hill (850/480 SE), at the edge of the central plateau, after two previous excavation seasons. Neo-Assyrian pottery and various small finds (see below) were already found in the Hellenistic-Parthian layers, dislodged from their original context by the pits and earthworks of the later period.[15] As in the other areas, we found that the earliest Hellenistic buildings were built directly atop the ruins of Assyrian buildings and that when the paving of the courtyard was made, Assyrian pottery fragments were used to fix the large stone slabs. The most important find from this layer was a Neo-Assyrian bronze horse bell (*Fig. 19*, see below).

Fig. 7. The 1.20 m wide block stone foundation (SNR 455) of the Neo-Assyrian building in Trench 2. The round imprints at the bottom may be timber beam wall reinforcements. A ritual deposition was found in the location marked by the arrow.

Beneath the Hellenistic building, a roughly NW-NE oriented stone wall (SNR 455) was found, which followed the perimeter of the hill. The wall, which clearly dates back to the Neo-Assyrian period, could be traced for about 3 m in the excavated area, but was interrupted on the north

[14] The excavations in Trench 2 were supervised by Gábor Kalla.
[15] Dezső, Kalla et al. 2017, 375–380.

side by a doorway at least 1 m wide. There was no cross-wall in this area, and the other side of the doorway was not found. No floor level was observed and the fact that the edges of the wall were not perfectly straight suggests that it was a foundation *(Fig. 7)*. The 1.20 m wide wall was a double-wall construction, whose outer part was made of larger unworked blocks, some 70 cm in diameter, and the interior was filled with smaller stones. Two circular imprints between the stones next to the south section wall indicate a timber reinforcement. The vertical beams are indicative of a timber-framed wall construction common in the Syria-Palestine-Anatolia region, designed to provide greater resilience to the wall in the event of an earthquake.[16]

Fig. 8. The ritual deposition of the SNR 455 wall foundation. A small hand-thrown vessel placed in a stone depression was surrounded by ash.

A small, hand-thrown vessel surrounded by ash was found in a natural depression in the larger rough stone *(Fig. 8)*. It seems likely that the pot had been used for boiling some kind of liquid and the wall, presumably made of clay bricks, was built on top of the deposition. It may represent a foundation ritual, unattested in the Assyrian core area, possibly a local custom.

Based on the thickness of the wall and the nature of the finds, the structure may have been a larger building of the local elite, a large house or perhaps a storehouse.

Trench 4[17]

The largest area with Neo-Assyrian architecture excavated so far is Trench 4, where an east-west aligned stone wall of Neo-Assyrian date was uncovered in 2018, directly below the foundation of a

[16] Naumann 1971, 86–108, Wright 1985, 417.
[17] The excavations in Trench 4 were supervised by Attila Király.

1 m wide Hellenistic-Parthian stone wall excavated in 2017 (780/570 NE). Enlarging the 4x4 m large trench to the north (780/580 SE) revealed that while the southern section wall cut through a 4 m thick deposit, the Assyrian layers in the northern part were to be found below the current surface.

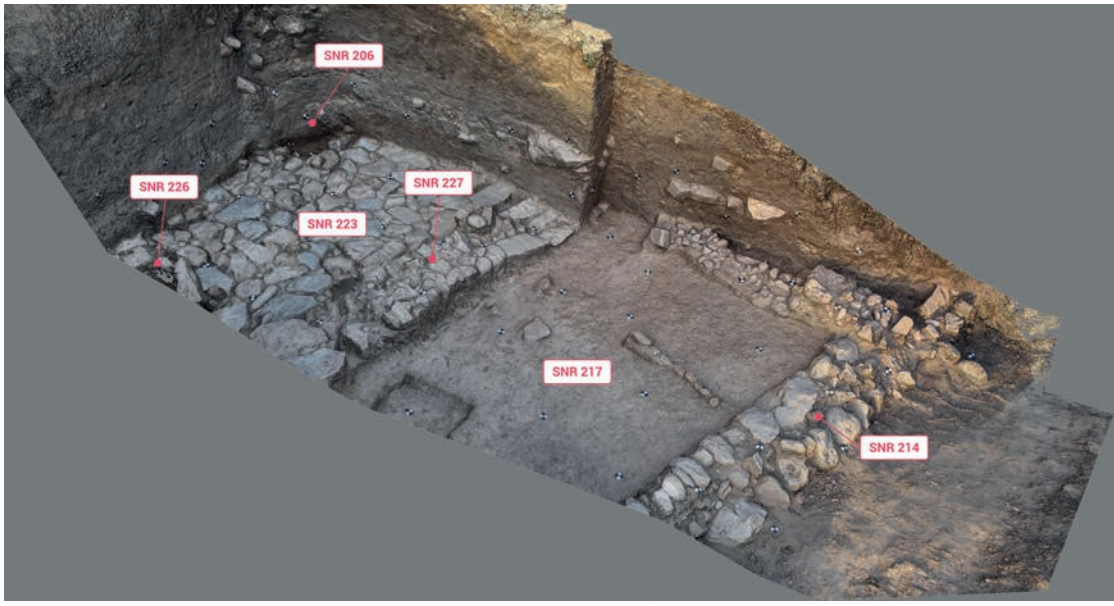

Fig. 9. The Neo-Assyrian residential building unearthed in Trench 4 in 2018. The courtyard (SNR 223) was paved with stone slabs of different sizes and of four different colours, creating a decorative polychrome effect. The brewing vessels were found near the low wall of the northern room (Room 2) (orthophoto by András Bödőcs).

Fig. 10. The northern wall of Room 2 (SNR 2014), built using the rubble-filled double-wall technique, marked the boundary of the erosion zone, while the Assyri

A part of a carefully paved courtyard (SNR 223; *Fig. 9-10*) was found in the southern part of the trench, in its north-west corner (Room 1). The stones were of different sizes, with larger slabs of around 50 cm in diameter and smaller ones of 20 cm. The combination of limestones of different colours (white, grey and pink) and a harder blue stone type gave a spectacular polychrome effect.

A similar courtyard with multi-coloured stones (white, grey and blue) was also found in Sounding 28 at Gird-i Gulak, not far from our site.[18] The paved courtyard is a feature of larger households in Assyrian core areas,[19] and it probably indicates an elite residence here too.

On the north side, the courtyard was bordered by an east-west stone wall (SNR 227), which ran across the trench and rose about 15 cm above the pavement. The 70–80 cm wide stone wall, was pierced by two narrow doorways, both slightly less than 70 cm wide, through which an internal room (Room 2) could be accessed. While the two sides of the wall were formed from bigger, 15 to 20 cm large pieces of unworked stones and cobbles, the interior was made up of small pieces rammed into clay. The thresholds were larger stone slabs, 40–60 cm in diameter. The eastern side was bounded by a structure of vertical stone slabs (SNR 226), perhaps pieces to secure a previously removed threshold, so this possibly marks the eastern boundary of the courtyard.

Fig. 11. The irregular burial of a man found lying on his stomach in the south-west corner of Trench 4. His death can perhaps be linked to the destruction of the settlement.

Scattered across the floor were five heavily corroded domed ingot-like artefacts of iron with a maximum diameter of 14 cm, probably semi-finished products. In addition, the heavily worn rim sherd of a glazed aryballos, originally of turquoise-blue colour, was also found. In the southwest corner of the trench, just outside the western section wall, was the irregular burial of a man lying on his stomach with his body twisted *(Fig. 11)*. Based on its position and the burnt layer immediately above it, it seems likely that his death was related to the destruction of the settlement.

North of the courtyard, the remains of another room (Room 2) were discovered. In addition to its southern wall, the northern and western walls (SNR 214) also fell into the excavated area, so

[18] Skuldbøl et al., in this volume, Fig. 28.
[19] See Miglus 1999, 131–175, Taf. 64–85.

only the eastern extent is unknown. The shorter western side of the room is 2.5 m long, while the longer side is at least 4 m long; it had a packed clay floor. Parallel to the western wall, at a distance of 1.5 m from it, two spouted round-based pots were found next to a low wall, which had been fixed with gravel and pottery fragments. A third pot of a similar size was also found, but with a perforation through its base *(Fig. 12, 16)*.

Fig. 12. Two of the three beer brewing vessels, found in their original position.

All three vessels lay *in situ* and their shape suggests that they were used for brewing (see below). To their east, the remains of a *tennūr*-oven were discovered, partly in the section wall. Of the many stone objects lying around, a pestle found beside the tennūr is noteworthy. It was a 40x15x10 cm piece of limestone, roughly shaped like a mace, with a strongly cracked surface, only the working surface was smoother.[20] The finds would suggest that Room 2 was a workroom where brewing was performed in conjunction with grain processing and baking.

In 2019, additional trenches were opened on the eastern (Trench 4/B) and western sides (Trench 4/C; 4/D) of Trench 4, and although we did not reach the Assyrian levels this season, several small artefacts were found in the overlying layers which, together with the finds excavated in 2018, suggested the presence of a larger Assyrian official household. This was already assumed on the basis of the elaborately constructed courtyard.

[20] See Király, in this volume, Fig. 3.1.

Trench 4/A[21]

In 2018, a new trench (780/590 SW; 770/590 SE) was opened 10 m north of Trench 4, at the foot of the steep slope, to determine the stratigraphic conditions in that area. We found that similarly as on the northern side of Trench 4, a layer of Neo-Assyrian material lies directly beneath the uppermost deposit in the northern part of the trench, and almost intact artefact assemblages were recovered. The *in situ* assemblages were protected by cobbling in the eastern part and a stone slab paved area in the western part (SNR 502), possibly a courtyard, whose date is uncertain because of the mixed finds found above it *(Fig. 13)*. Its use may date to the Hellenistic period. The walls of a later Hellenistic-Parthian building (SNR 513, 514) constructed of large stone blocks were found in the southern part of the paved area, which thus represent two separate building periods.

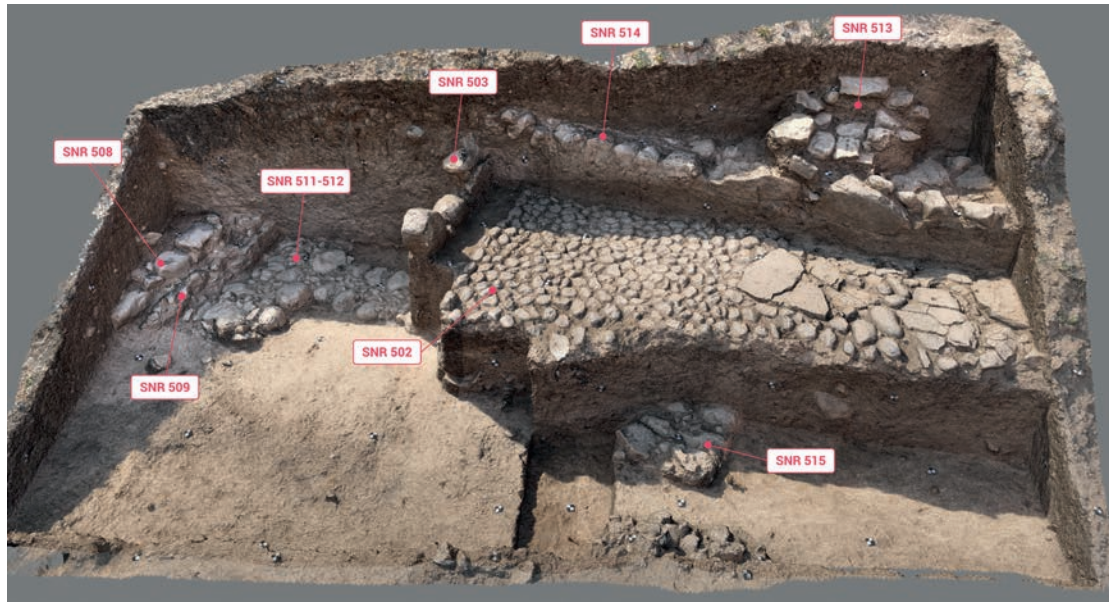

Fig. 13. The axonometric model of Trench 4/A in 2018. The remains of the Assyrian building (SNR 511-512, 515) were uncovered under the courtyard (SNR 502), which is probably of Hellenistic date. The area in the foreground was destroyed by erosion (3D model by András Bödőcs).

Beneath the pavement were unquestionably Assyrian layers. Two parallel walls adjacent to each other on the eastern side (SNR 508) of the trench suggest that they represent two separate buildings, of which only a room of the western one could be excavated. The construction techniques of the two adjacent and probably contemporaneous walls differed: the slightly higher one to the east (SNR 508) had a beaten earth foundation (SNR 509) and was constructed of larger stones, while the western one (SNR 511-512, 515) was built using the same double-wall masonry technique seen in Trench 4, with the exterior made of larger stones and the interior of smaller stones set in clay. The south wall has not yet been fully excavated, but it is clear from the east and west walls that it is a relatively small room, 2.20 m wide, perhaps a storeroom. Although the northern side of the room has been destroyed by erosion, two rich assemblages were found in the remaining 0.80 m wide narrow space.

The two find concentrations were made up of ten more or less intact vessels that had been deliberately stacked or had fallen on top of each other, including drinking, cooking and storage

[21] The excavations in Trench 4/A were supervised by Nóra Szabó.

vessels *(Fig. 14)*. None of them are wheel-turned and some are relatively crudely formed. A number of stone tools also lay at the bottom of the pile, including a broad-headed granite stone tool, possibly a pestle.[22] There are indications that the two sets of objects are the result of a hasty selection process: the more valuable pieces were removed and the rest were piled up, perhaps in the face of a devastating attack.

Fig. 14. The two groups of vessels and stone tools in the Assyrian building uncovered in Trench 4/A.

The layout of the Neo-Assyrian settlement on the mound

The excavations in the various trenches already offered a broad picture of the Neo-Assyrian settlement of Grd-i Tle, at least of the inner part of the hill. Based on the current record, it would appear that the upper part of the tell is completely occupied by the fortress and the glacis protecting it, at least 10–15 m in height. This was surrounded by terraced dwellings on at least two or three levels, and connected to this was the lower settlement, which was enclosed by an outer wall. The difference in level between the terraces was clearly visible in the case of the buildings of the opened trenches in the lower part of the hill to the north. The level of the courtyard of the dwelling house of Trench 4 was 582.2 m, while the floor level of the excavated room in Trench 4/A, 10 m to the north, was 577.2 m, a difference of 5 m. Roughly at about the level of Trench 4 was the Assyrian building of Trench 2, open on the east side, with the top of the wall foundation uncovered at 581.9 m.

[22] See Király, in this volume, Fig. 3.2.

Pottery

The assessment of the Neo-Assyrian ceramics found so far is still in progress,[23] and here I will merely highlight a few more interesting types. In general, the same types are found here as on the area's other sites: fine ware, slipped ware, glazed ware, common ware, cooking ware and coarse ware, with a predominance of common ware. Burnishing is also often found. A separate group is represented by a crudely formed, well-fired, hand-thrown ware, which includes smaller pieces *(Fig. 15)*. One peculiar phenomenon is that these vessels were used in the same households as the very fine Palace Ware. There is a relatively low proportion of wheel-thrown pottery and it is almost entirely restricted to fine pottery.

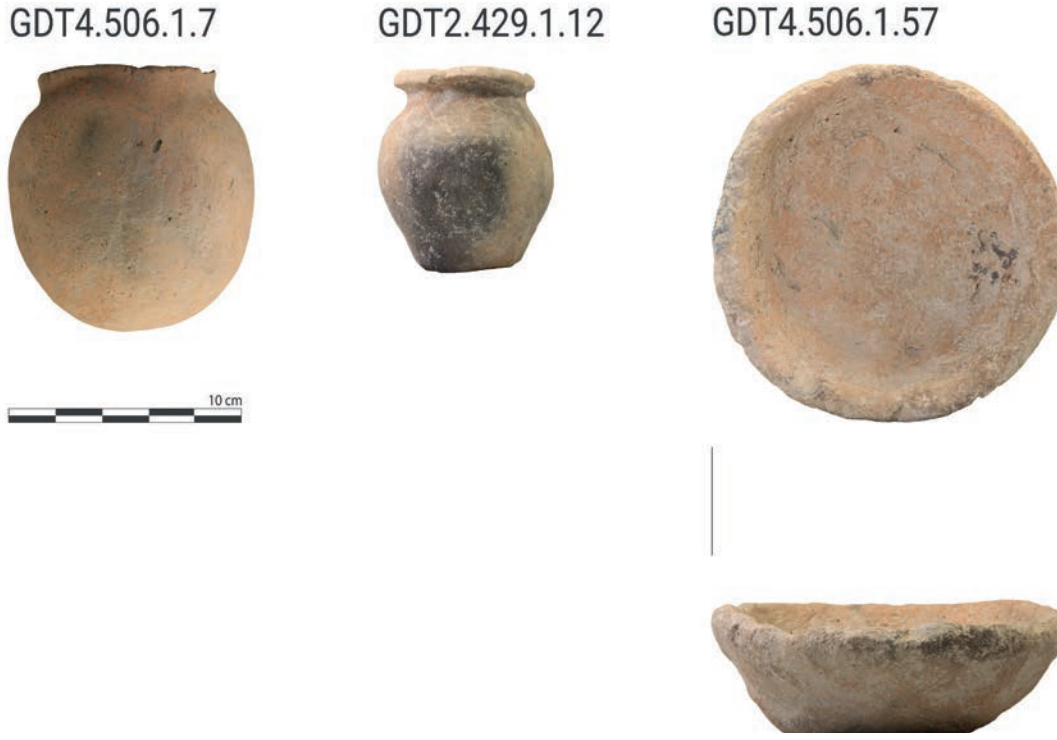

Fig. 15. Crudely formed hand-thrown Neo-Assyrian vessels.
The one in the centre was part of the foundation deposit found in Trench 2.

Palace Ware

Palace Ware, the very fine, thin-walled, well-fired luxury pottery made of highly depurated untempered clay, was ubiquitous in the Neo-Assyrian layers, although often in small fragments *(Fig. 16)*. Palace Ware vessels were most abundant in Trench 4, in the mixed layer above the Assyrian house. Most are olive-green in colour or, less often, pale yellow, sometimes almost butter-coloured.[24] Although complete vessel profiles have not been recovered, many fragments correspond to well-

[23] The assessment of the ceramic finds is carried out by Abdullah Othman (Salahaddin University, Erbil) with the help of the author. Maha Sulaiman (PhD student, Budapest) is preparing a PhD thesis on cooking ware.
[24] For colours, see Hunt 2015, 73.

known types, usually bowls and beakers (cups), while larger jars have not yet been found.[25] Several Miniature Palace Ware jars decorated with three rows of grooves around shoulder also came to light. The small aryballoi made with the Palace Ware technique are quite noteworthy.

Fig. 16. A selection of Palace Ware pottery found until 2019. In most cases, only very small fragments were found.

Beer brewing vessels

Three medium-sized brewing vessels were recovered from room 2 of the house uncovered in Trench 4 (see above). All three had a capacity of approximately 18 litres; two were fitted with a spout below the rim, while the third, with a similar rounded base, lacked a spout but had a perforation through the base *(Fig. 17).* This perforation was subsequently patched and the area around the opening was coated with bitumen. Similar vessels with a perforation through the base (dugníĝ-dúr-bùr = *namzītu*, "Lochbodengefäß") were used in earlier periods in Mesopotamia for brewing beer. Based on the description of the process of beer brewing in the text of the Sumerian hymn to the goddess Ninkasi,[26] Marie-Henriette Gates was able to identify the function of this vessel type in the pottery of Late Bronze Age Tell Hadidi (Syria).[27] Her work was continued by Walther Sallaberger, who suggested that the Old Babylonian pots with perforated bases had functioned as brewing utensils.[28] Fermenting vessels with perforated bases, although with a much larger capacity, were found in

[25] Hunt 2015, 47–57, Forms A and B.
[26] Sallaberger 2012, 321.
[27] Gates 1988, 6–68.
[28] Sallaberger 1986, 83, Taf. 5. For this vessel form and its other possible uses, see Sollee 2012.

almost every household on the Middle Bronze Age settlement of Tell Bazi (Syria)[29] and their use was tested in a brewing experiment.[30]

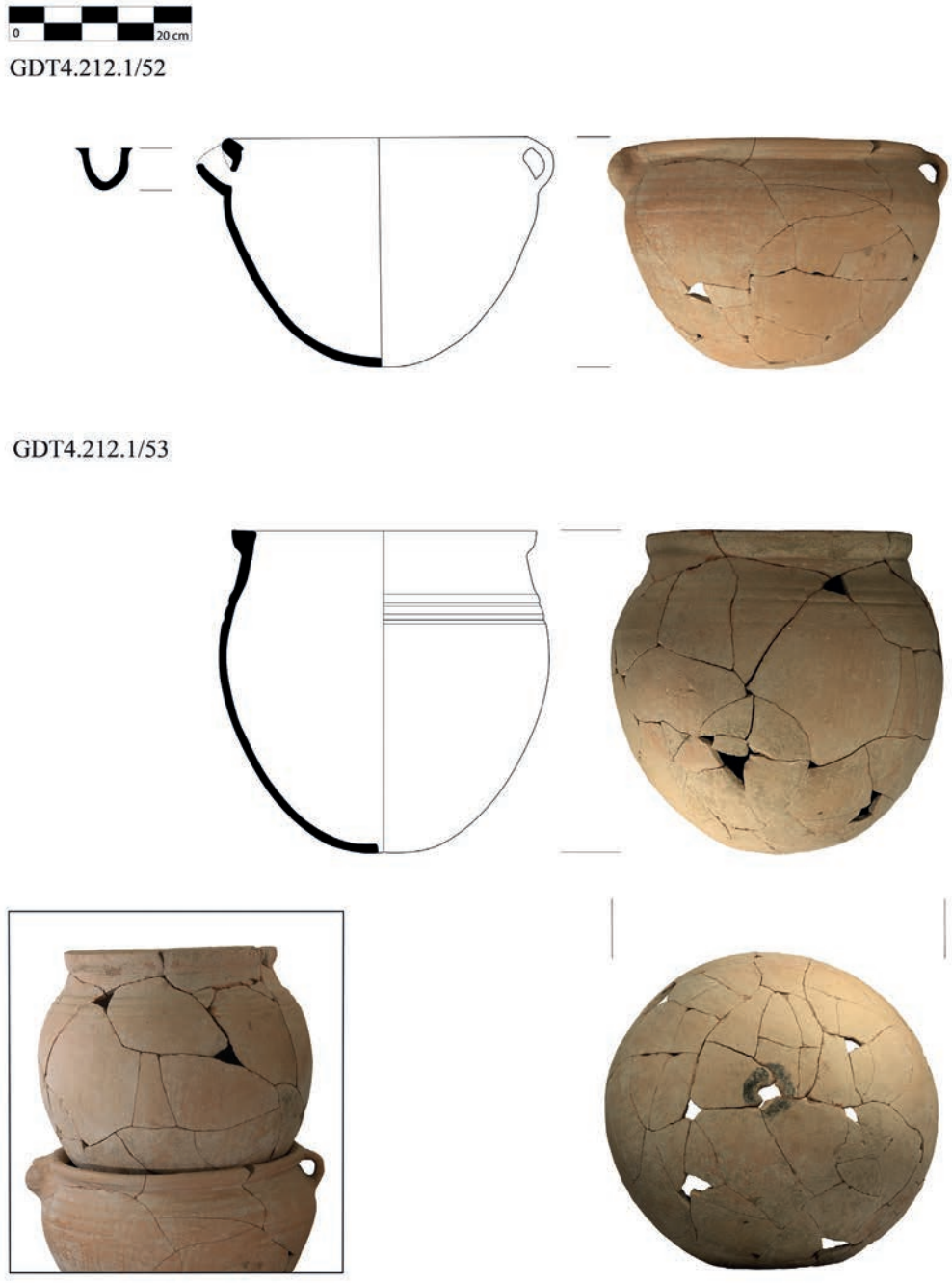

Fig. 17. The two types of beer brewing vessels found in situ in Trench 4. A vessel with perforated base may have been used for fermenting beer: the vessel was placed on top of the spouted vessels into which the beer could drip through a piece of cloth placed over the base.

[29] Otto 2006, 86–93, Abb. 44.
[30] Zarnkow et al 2008.

Gates can also be credited with linking the spouted vessels to the pots with perforated bases and associating their function with brewing. Spouted vessels of this type are attested in the Old Babylonian material,[31] although their function has not yet been established.

Curiously enough, the brewing vessel forms found at Grd-i Tle are not mentioned in the studies on the pottery of the Neo-Assyrian period, and these would be the first known examples from this period. A vessel with perforated base may have been used for fermenting beer by setting it on the spouted vessels into which the beer could drip through a piece of cloth placed over the base.[32] This vessel type can be plausibly identified with the *namḫāru* vessel (^{dug}ma-an-hara$_4$) mentioned in Ur III and in Old Babylonian documents.[33]

Although of a very high quality, the Grd-i Tle vessels were probably made on a slow wheel, with the upper part receiving its final form on a fast wheel. The surface treatment was the same burnishing technique as at Gird-i Bazaar. Thin horizontal parallel lines were smoothed on the vessel below the rim and on the shoulder, and the same was done vertically on the lower part.[34] It is possible that this form was linked to a local tradition.

Fig. 18. Foot ending in a bull's hoof, originally part of a tripod which probably served as a cooking pot stand.

Ceramic stand (tripod) for cooking pot with bulls' leg

In Trench 4/B, at the base of a wall built directly atop the ruins of a Neo-Assyrian house, a 22 cm long crudely formed foot fragment was found, which, based on its material, could be of Neo-Assyrian age *(Fig. 18)*. The lower end imitates a bull's hoof, the upper part clearly showing that it was attached to a 6.3 cm thick ring. It is therefore likely to have been a ceramic imitation of the bronze

[31] Armstrong – Gasche 2014, 31–32, Pl. 48.
[32] Sallaberger 2012, 321.
[33] Sallaberger 1986, 74, 104.
[34] Herr 2016, 85.

tripod cauldron stands well known from Assyria and the neighbouring areas. Its fabric is that of cooking ware, characteristically with large-grained mineral tempered with. After firing, many grains protruded through the vessel surface. Secondary burn marks indicate that it was used in a fire, so it can be reasonably assumed that it was placed over hearths as a cooking pot stand.

Small finds

The Assyrian period artefacts reflect a wide network of these households, extending from Afghanistan to Egypt, and indicate that they were part of a large empire and of the circulation of material goods various commodities. The more noteworthy finds include the fragment of a bronze bowl, a bronze bell, lapis lazuli, carnelian and Egyptian blue beads, as well as faience scarabs and scaraboids. Most notable is a typical Assyrian cylinder seal.

Fig. 19. Openwork bronze bell with an iron clapper found together with this large stone bead in Trench 2. They were apparently hanging from the same strap.

Bronze artefacts

Relatively few bronze artefacts of the Neo-Assyrian period came to light, mostly arrowheads,[35] countless small needle fragments, a heavily corroded fibula and some small rings. Most important among these is the fragment of a bronze bowl, recovered from a secondary context in Trench 1, in the rubble layer of the later upper fortification. The small fragment (3.3 cm) comes from the central part of a shallow bowl decorated with incised rosettes. The parallels from the Assyrian core areas suggest that it may have been an Assyrian work.[36]

[35] For the arrowheads found in the first two seasons (2016–2017), see Dezső 2017. In the next two seasons, two other exemplars of the socketed bronze trilobate type were found.

[36] For a discussion, see Dezső – Mordovin 2016, 249; Fig. 16.7.

Another interesting metal artefact is a bronze bell with an iron clapper *(Fig. 19)*, part of a horse gear, found in Trench 2, in the fill above the Assyrian building. The small, 5.3 cm high bell was found together with a relatively large (2.5 cm) reddish veined stone bead, apparently associated with it and hanging from the same strap. The 5.3 cm long iron clapper was found in its original position. It retained the bronze wire loop to secure it to the strap. It is of the openwork type, with triangular apertures on three sides and a slit on the fourth. Although openwork pieces are more typical for Urartian types, this exemplar is rather unique in this form.[37]

Personal ornaments

Although no formal burials of the Neo-Assyrian period were found until 2019, several faience amulets, stone and Egyptian blue beads and a pendant were recovered from Trench 2 and Trenches 4, 4/B and 4/C, especially from the Hellenistic layers overlying the Assyrian occupation. These may not only be lost pieces, but also pieces that were redeposited from disturbed graves.

Fig. 20. Egyptian faience scarab with hieroglyphic inscription and two scaraboids.

[37] For a discussion and comparison with the Assyrian and Urartian types, see Dezső – Niederreiter – Bodnár 2021, 227.

Faience scarab and scaraboids

In 2019, we found a faience (Quarzkeramik) scarab and two faience scaraboids *(Fig. 20)* in Trenches 4/C and 4/B, in the Hellenistic layers above the Assyrian house. The surface of the finely made scarab measuring 1.45 x 1.0 x 0.8 cm is mostly eroded, but it is clear that its original colour was turquoise blue. The hieroglyphic inscription on the base reads *nb ḥtp*, "all contentment", suggesting that it is Egyptian.[38] It is pierced along its length, indicating that it was a personal adornment intended to protect its wearer as an amulet, as did the two other faience objects, the scaraboids.

Both scaraboids, of similar size, are flat and ovoid in shape. The first piece, with a schematically drawn caprid (1.65 x 1.05 x 0.5 cm), was intact, while the other (1.85 x 1.15 x 0.7 cm) had a damaged surface, but its motif, a winged sun disk, can still be made out. Their entire surfaces are heavily worn and have by now become almost completely white, although in the case of the second piece, its original turquoise blue colour, similar to the scarab, can still be seen.

These two scaraboids can be assigned to the North Syrian product group designated as the FSV Group (Flügelsonne – Scorpion – Vogel) by Dirk Wicke.[39]

The three pieces represent the Assyrian household's western connections, which reached as far as Egypt through intermediaries.

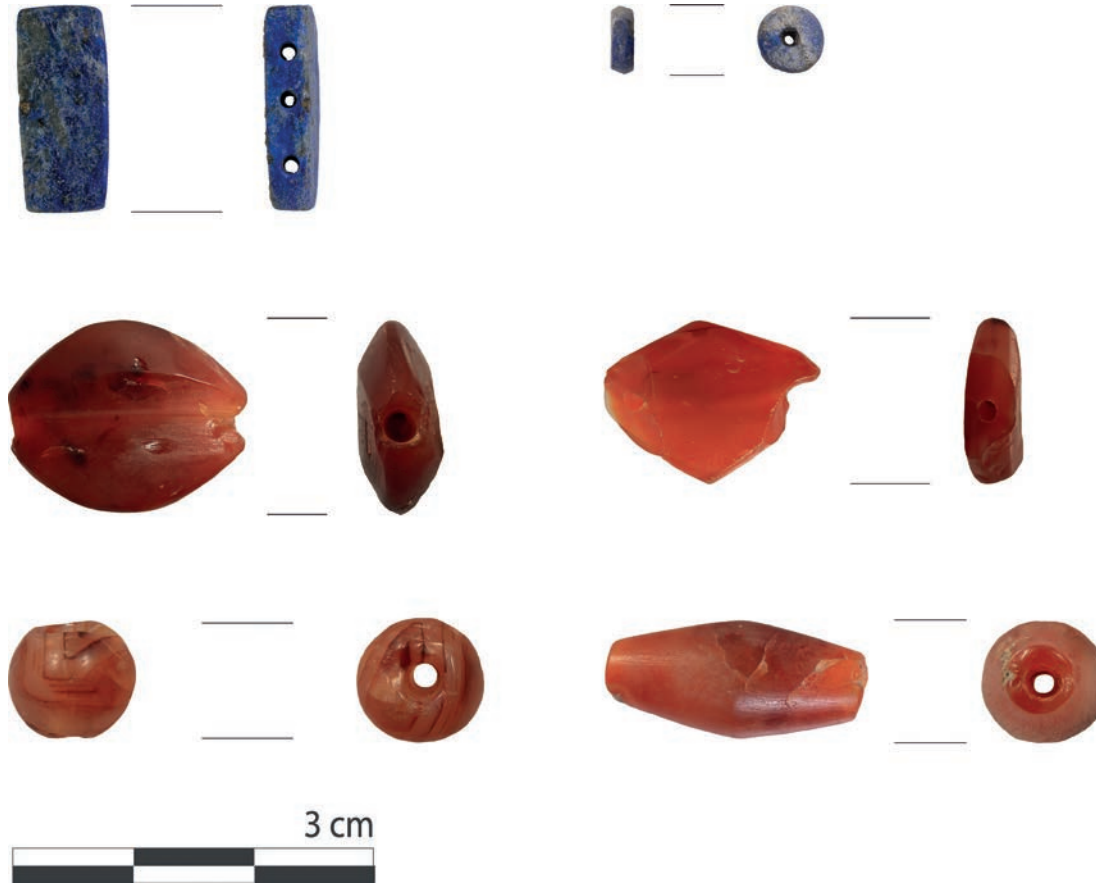

Fig. 21. Lapis lazuli and carnelian beads.

[38] Kind personal communication of Tamás Bács (Department of Egyptology, ELTE, Budapest).
[39] For a discussion of this group, see Wicke 2012.

Stone and Egyptian blue beads and pendant

Most of the beads brought to light so far are fashioned from carnelian, and are simple biconical, spherical and disc-shaped pieces, although rhomboid and butterfly pieces also occurred *(Fig. 21)*. Of particular note because of its rarity is a small rectangular lapis lazuli spacer bead with three perforations (1.8 x 0.8 x 0.4 cm), near which lay a small disc-shaped bead (0.6 cm) of lapis lazuli in the Hellenistic layer of Trench 2.[40] The rarity and expensive nature of lapis lazuli can be ascribed to its distant source in Afghanistan, and its use clearly indicates an elite context.

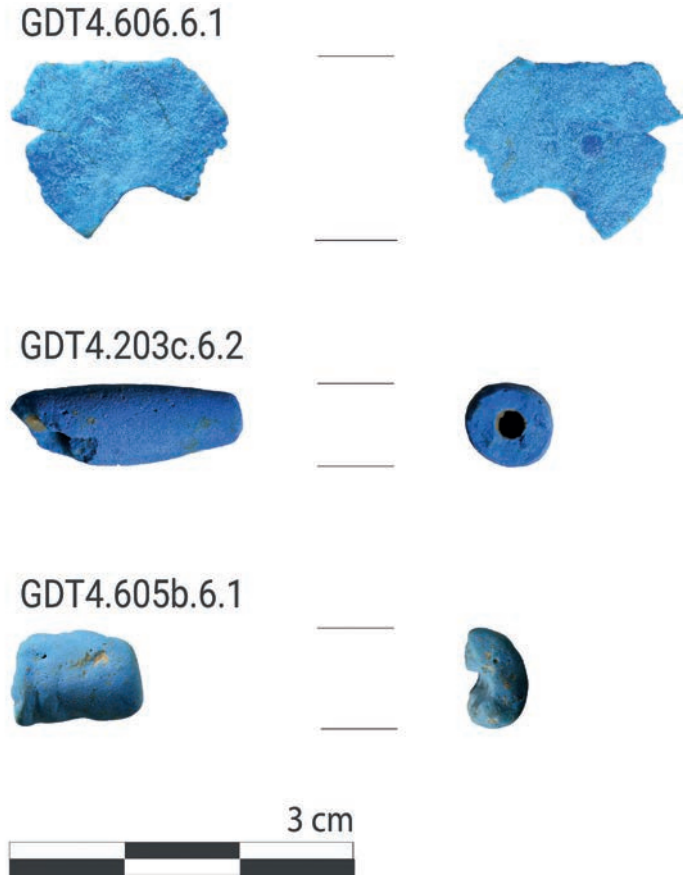

Fig. 22. Egyptian blue personal ornaments.

Of particular interest are the Egyptian blue beads and the pendant *(Fig. 22)*, all found in Trenches 4/B and 4/C in 2019, in the Hellenistic levels above the Assyrian house. One of the three ornaments is a strongly worn, semi-cracked, cylindrical bead (1.3 x 0.9 cm) that may have originally been a cylinder seal with a geometric pattern, although it could equally well be a simple segmented (grooved) piece. The second is a partially damaged long biconical bead (1.9 x 0.65 cm), while the third is a heavily damaged, thin, disc-shaped pendant (diam.: 2.0 cm). The production of Egyptian blue, intended to imitate lapis lazuli, was widespread in the Iron Age, and therefore the origin of Egyptian blue artefacts cannot be determined without archaeometric analyses; they could equally

[40] See Dezső – Kalla et al. 2017, 375–377, Fig. 15, 16.1,4.

well come from the Assyrian core area or from northern Syria.[41] It is unclear whether Egyptian blue artefacts reached the area in the wake of the Assyrian expansion; however, new excavations have yielded a growing number of such artefacts in the Raparin region.[42]

Cylinder seal

One of the most important finds of the 2019 season was a cylinder seal discovered in the Hellenistic fill above the Assyrian dwelling in Trench 4/C, not far from the scarab. The slightly barrel-shaped cylinder seal measuring 2.3 x 1.0 cm was made of shiny black serpentinite with green mottling. Its surface is extremely worn, with some of the motifs almost completely abraded. The bronze pin with the loop at the top is still in the perforation.

Fig. 23. Serpentinite cylinder seal with bronze pin and loop, depicting a court ritual scene with a royal figure and a eunuch court official.

The scene, cut in linear style, is framed by a line on top and at the bottom. Despite its worn appearance, the motif can be clearly identified from its parallels. The bearded royal figure wearing

[41] For the distribution of Egyptian blue in the Near Eastern Iron Age, see Zaina et al. 2019.
[42] Dinka Settlement Complex: Squitieri 2018, 131, 149, Fig. G6; Squitieri 2019, 131, Fig. H14-15 Squitieri 2020, 108-109, Fig. E1.21. Usu Aska: MacGinnis et al., in this volume, Fig. 25.

a fringed robe standing to the right holds a bow in his right hand and raises a cup with his left. On the other side, a beardless attendant, also clad in a fringed robe, holds a barely visible flag-shaped fan in his right hand and a towel in the other. The line on the back may indicate the spiked shield that appears on many other pieces. Between the two figures is a tall stand with a pot with a pointed base. The points in front of the ruler's head could be a very simplified representation of the star motif. The brush-tree, so common elsewhere, is missing here. This depiction is extremely schematic, clearly a piece of inferior quality.

There are many examples of this type of cylinder seal in various museum collections, and many different versions of the imagery are known.[43] Dominique Collon classified this type as the "Pot stand group", although some versions have the king seated at a table. The latter were assigned to the "Table group", where a table is shown instead of a pot stand. The reliefs in the Northwest Palace in Nimrud, especially in Room G, suggest that the scene depicts a royal ritual. This type is most likely of Assyrian manufacture, despite the fact that many pieces are known from the northern periphery.[44]

Similarly to the other pieces of the "Pot stand group", this cylinder seal was most likely made during the ninth century BCE,[45] and is virtually the single well-dated Neo-Assyrian piece from the Grd-i Tle. However, its strongly worn condition suggests that it may have been buried much later. Its royal iconography is perhaps an indication that it was in the possession of a local Assyrian official.

Conclusion

The features and artefacts found at Grd-i Tle suggest that the site was probably a Neo-Assyrian local administrative centre with a fortress in its centre and a terraced lower town organised into several zones in different levels, which were occupied by large households of the Assyrian administrative elite. The small excavated areas do not yet allow us to prove this conclusively, so our goal in the coming seasons is to examine the Assyrian layers of the citadel and to gain a better understanding of the nature of the Assyrian occupation and its buildings.

[43] A serpentinite cylinder seal of this type was found recently at Pir Wali (Iraqi Kurdistan) in the northern borderland of the Assyrian Empire, although on this piece the ruler is holding a staff instead of a bow (Beuger et al. 2021, 111–113; Abb. 17.A).

[44] For the most detailed discussion of this type of scene and its relationship to the palace reliefs, see Collon 2001, 64–78.

[45] See Collon 2001, 64.

Bibliography

Armstrong – Gasche 2014 — Armstrong, J. A. – Gasche, H., *Mesopotamian Pottery: A Guide to the Babylonian Tradition in the Second Millennium B.C.,* (Mesopotamian History and Environment 2/6), Ghent – Chicago, 2014.

Beuger et al. 2021 — Beuger, C. – Heitmann, R. – Pastwa, S. – Schlüter, S. – Suleiman, A., „Assyrer in nordwestlichen Zagros? Bericht zu den rabungskampagnen 2017–2019 in Pir Wali", *Mitteilungen der Deutschen Orient-Gesellschaft zu Berlin* 153 (2021), 95–16.

Collon 2001 — Collon, D., *Cylinder Seals V. Neo-Assyrian and Neo-Babylonian Periods*, (Catalogue of the Western Asiatic Seals in the British Museum), London, 2001.

Curtis 2013 — Curtis, J. E., *An Examination of Late Assyrian Metalwork with Special Reference to Nimrud*. Oxford, 2013.

Dezső 2017 — Dezső, T., „The arrowheads from Grd-i Tle (Rania Plain, Iraqi Kurdistan)", *Dissertationes Archaeologicae ex Instituto Archaeologico Universitatis de Rolando Eötvös nominatae* Ser. 3 No. 5 (2017), 97–112.

Dezső – Kalla et al. 2016 — Dezső, T. – Kalla, G. – Mordovin, M. – Masek, Zs. – Szabó, N. – Ismail, B.B. – Rasheed, K. – Weisz, A. – Sándor, L. – Khwsnaw, A. – Amin, A. A. H., "Grd-i Tle 2016. Preliminary Report of the Hungarian Archaeological Mission of the Eötvös Loránd University to Grd-i Tle (Saruchawa) in Iraqi Kurdistan", *Dissertationes Archaeologicae ex Instituto Archaeologico Universitatis de Rolando Eötvös nominatae* Ser. 3 No. 4 (2016), 233–240.

Dezső – Kalla et al. 2017 — Dezső T. – Kalla G. – Ismail, B. B. – Bödőcs, A. – Fülöp, K. – Király, A. – Khwsnaw, A. – Szabó, N. – Németh, V. – Németh, F. A. – Amin, A. A. H., "Preliminary Report on the Hungarian Archaeological Mission (Eötvös Loránd University) at Grd-i Tle (Saruchawa) in Iraq: Second Season (2017)", *Dissertationes Archaeologicae ex Instituto Archaeologico Universitatis de Rolando Eötvös nominatae* Ser. 3 No. 5 (2017), 361–392.

Dezső – Mordovin 2016 — Dezső, T. – Mordovin, M., " The first season of the excavation of Grd-i Tle. The Fortications of Grd-i Tle (Field 1). *Dissertationes Archaeologicae ex Instituto Archaeologico Universitatis de Rolando Eötvös nominatae* Ser. 3 No. 4 (2016), 241–262.

Dezső – Niederreiter – Bognár 2021 — Dezső, T. – Niederreiter, Z. – Bodnár, Cs., *Urartian Bronzes. A Preliminary Report on a Looted Hoard of Urarṭian Bronzes*, (Antiqua et Orientalia 8; Assyriologia 11), Budapest, 2021.

Gates 1988 — Gates, M.-H., „Dialogues between Ancient near Eastern Texts and the Archaeological Record: Test Cases from Bronze Age Syria", *Bulletin of the American Schools of Oriental Research* 270 (1988) 63–91.

Herr 2016 — Herr, J.-J., „The pottery from Gird-i Bazar, 2015: a preliminary study". In: Radner, K. – Kreppner, F. J. – Squitieri, A., eds., *Exploring the Neo-Assyrian Frontier with Western Iran. The 2015 Season at Gird-i Bazar and Qalat-i Dinka,* (Peshdar Plain Project Publications 3), Gladbeck 2016, 80–99.

Hunt 2015	Hunt, A. M. W., *Palace Ware Across the Neo-Assyrian Imperial Landscape: Social Value and Semiotic Meaning*, (Culture and History of the Ancient Near East 78), Leiden – Boston, 2015.
Kalla – Dezső 2019	Kalla, G. – Dezső, T., "Hungarian Archaeological Expedition in the Mountains of Iraqi Kurdistan. Excavations undertaken by the Faculty of Humanities", Eötvös Loránd University at Grdi Tle (Rania Plain). *Hungarian Archaeology. E-Journal* 8/4 (2019) 1–12.
Király 2017	Király, A., "Grd-i Tle knapped and ground stone artefacts, excavation seasons 2016–2017", *Dissertationes Archaeologicae* Ser. 3, 5 (2017), 83–96.
van Loon 1966	van Loon, M. N., *Urartian Art. Its Distinctive Traits in the Light of New Excavations*, (Publications de l'institut historique et archeologique neerlandais de Stamboul 20), Leiden, 1966.
Miglus 1999	Miglus, P. M., *Städtische Wohnarchitektur in Babylonien und Assyrien*, (Baghdader Forschungen 22), Mainz, 1999.
Naumann 1971	Naumann, R., *Architektur Kleinasiens von ihren Anfängen bis zum Ende der hethitischen Zeit*. Tübingen, 1971.
Oates 1959	Oates, J., „Late Assyrian Pottery from Fort Shalmaneser." *Iraq* 21 (1959), 130–146.
Otto 2006	Otto, A., *Alltag und Gesellschaft zur Spätbronzezeit: Eine Fallstudie aus Tall Bazi* (Syrien), (Subartu 19), Turnhout, 2006.
Sallaberger 1986	Sallaberger, W., *Der babylonische Töpfer und seine Gefäße. Nach Urkunden altsumerischer bis altbabylonischer Zeit sowie lexikalischen und literarischen Zeugnissen*, (Mesopotamian history and environment 2/3), Ghent, 1986.
Sallaberger 2012	Sallaberger, W. „Bierbrauen in Versen. Eine neue Edition und Interpretation der Ninkasi-Hymne." In: Mittermayer, C. – Ecklin, S., eds., *Altorientalische Studien zu Ehren von Pascal Attinger: mu-ni u4 ul-li2-a-aš ĝa2-ĝa2-de3* (Orbis biblicus et orientalis 256), Fribourg – Göttingen, 291–328.
Sollee 2012	Sollee, A., Zur Verteilung und Verbreitung der Lochbodengefäße im syro-mesopotamischen Kulturraum." In: Baker, H. – Kaniuth, K. – Otto, A., eds., *Stories of long ago. Festschrift für Michael Roaf* (Alter Orient und Altes Testament 397), Münster, 2012, 625–644.
Squitieri 2018	Squitieri, A., „The Iron Age small finds of the 2017 campaigns at DLT2 and Gird-i Bazar" In: Radner, K. – Kreppner, F. J. – Squitieri, A., eds, *The Dinka Settlement Complex 2017: The Final Season at Gird-i Bazar and First Work in the Lower Town*, (Peshdar Plain Project Publications 3), Gladbeck, 2018, 146–136.
Squitieri 2019	Squitieri, A., „The 2018 small finds from Qalat-i Dinka and DLT3." In: Radner, K. – Kreppner, F. J. – Squitieri, A. eds, *The Dinka Settlement Complex 2018: Continuing the Excavations at Qalat-i Dinka and the Lower Town*, (Peshdar Plain Project Publications 4), Gladbeck, 2019.
Squitiery 2020	Squitieri, A., „The 2019 small finds from Qalat-i Dinka (QID')" In: Radner, K. – Kreppner, F. J. – Squitieri, A., eds, *The Dinka Settlement Complex 2019: Further Archaeological and Geophysical Work on Qalat-i Dinka and the Lower Town*, (Peshdar Plain Project Publications 5), Gladbeck, 2020, 95–111.

Wicke 2012	Wicke, D., „ Eisenzeitliche Quarzkeramikobjekte aus Nordsyrien – nicht nur zum Stempeln und Rollen." In: Baker, H. – Kaniuth, K. – Otto, A., eds., *Stories of long ago. Festschrift für Michael Roaf* (Alter Orient und Altes Testament 397), Münster, 2012, 686–712.
Wright 1985	Wright, G. R. H., *Ancient building in South Syria and Palestine*, (Handbook of Oriental Studies. Section 7 Art and Archaeology, Volume: 1/2B/), Leiden – Köln, 1985.
Zaina et al. 2019	Zaina, F. – Baraldi, P. – Cardini, V. – Cavriani, M. – Zannini, P., „Archaeometric Characterization of a Blue Ingot from the Palace of Sargon II at Karkemish (Turkey) and the Distribution and Function of Egyptian Blue in the Near East during the Iron Age", *Mesopotamia* 54 (2019) 181–196.
Zarnkow et al. 2008	Zarnkow, M. – Spieleder, E. – Back, W. – Sacher, B. – Otto, A. – Einwag, B., „Kaltmaischverfahren – eine Basistechnologie zum altorientalischen Bierbrauen. Interdisziplinäre Untersuchungen in der Siedlung vor rund 3200 Jahren", *Jahrbuch der Gesellschaft für die Geschichte des Brauwesens, Berlin* 2008, 59–80.

Grd-i Tle worked stone implements

Attila Király

Near the suture zone of the Zagros Mountains, diverse and abundant rock material has been available for utilization in all periods – on the terraces along the watercourses reaching the Rania Plain, in the pediment area surrounding the plain, and in the mountains themselves (Király 2017). Thus, worked stone objects of transferable size are abundant at Grd-i Tle, often bearing use-wear. To avoid confusion in nomenclature, we have distinguished the following four groups in this artefact class: knapped lithics, (other) worked or ground stone tools, stone vessels, and stone ornaments.[1]

Knapped lithics, as their name says, have been produced by various knapping methods, usually without the application of other techniques, such as polishing. Both the end product and the 'waste' product of this technology are chipped stones. Between 2016 and 2019, approximately 400 such objects came to light, all in a secondary position, in Iron Age and Islamic Age fill layers or on the surface. The pieces examined so far date mainly to the prehistoric era; a more precise age is often impossible to determine, due to technotypological particularities of this artefact group and their secondary context (Király 2017). Stone vessels were classified into a separate group due to their assumed function as well as their distinct nomenclature and research history. For similar reasons, lithic costume elements, such as beads, other small items, and architectural ornaments, are also treated separately. For the time being, this group is underrepresented at the excavated portion of the site, and further study of them will be the topic of another paper. Finally, worked stones or ground stone tools are utilitarian objects produced by knapping, splitting, battering, abrasion, polishing, or a combination of these techniques, often used exactly in these activities as tools. We have retained the widely popular but misleading name of this artefact group 'ground stone', but we use it alternately with the phrase 'worked stone'. The objects belonging to this group have been examined in terms of the classification systems prevalent in Middle Eastern research (Eitam 2009; Király 2017; Squitieri 2019; Wright 1992). Since the beginning of our excavations, 158 such finds have been recorded.

Ground stone tools were mostly found in a secondary context: on the surface (11 pieces) or in fill layers, or as an element of built structures (126 pieces). The raw material, shape, and assumed function of these objects are, in the rarest of cases, cultural or age markers and therefore difficult to interpret at the current stage of research. Only 21 pieces came to light approximately *in situ*: the majority of them (14 pieces) were located in the Neo-Assyrian room of Trench 4a, four pieces were found in the Neo-Assyrian room of Trench 4, and the remaining three lay next to each other on one of the Hellenistic-Parthian-period floor levels in Trench 4c. Apart from these concentrations, the spatial distribution of ground stones is relatively even in the excavated sections of the tell.

The graph in *Fig. 1* presents the main tool types broken down by raw material. Ground stone implements frequently display only as few modifications as were necessary to perform certain functions, reflecting an opportunistic tool production strategy. Similarly, practical considerations may

[1] The assessment of the find material was supported by a grant from the National Research, Development and Innovation Office (NKFIH, Hungary), grant number K-132429 ("Intensive archaeological investigation of a local administrative centre of the Neo-Assyrian Empire").

also have played a major role in raw material selection, as the hardness of the rock and the smoothness of the surface largely determined the range of possible functions for these tools. The diversity and abundance of local rocks rendered long-distance import of stones to the site impractical and facilitated minimal-effort production of task-specific objects, in contrast to other areas poor in stone.

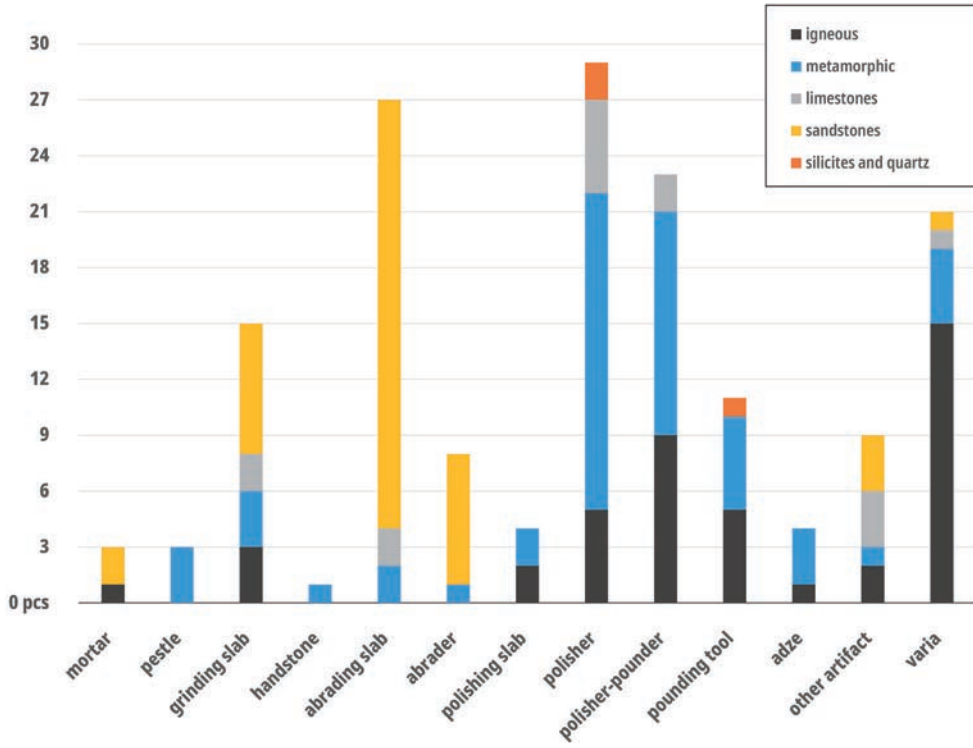

Fig. 1. Grd-i Tle (2016–2019), frequency of ground and worked stone tools (n=158 pieces) by type and raw material. Black: igneous rocks, blue: metamorphic rocks, grey: limestones and silicified limestones, yellow: sandstone, orange: cryptocrystalline rocks and quartz. Data and graphics: Attila Király.

Artefacts with a large flat or concave surface certainly were used as querns *(Fig. 3.3)*. The smoothness of these abrasive surfaces was a function of the raw material texture, and we distinguish different types accordingly: grinding, abrading, polishing. Concerning the ratio of the three types, it should be noted that objects in the most populous category, abrading slabs, are mostly fragments of sandstone slabs; it could not be determined whether these acquired their current shape and size before or after their use, and therefore, each fragment was registered as an individual tool. Several spherical or cuboid handstones bear traces of battering, pounding, or abrasion or have flat, polished surfaces, and some pieces wear all these traces simultaneously *(Fig. 2)*. Based on the location of use-wear, the raw material type, and size, we divided these artefacts into the categories of pestle, handstone, abrader, polisher, polisher-pounder, and pounding tool. The *other artefact* and *varia* categories in the graph in *Fig. 1* include mainly fragments of objects. A smaller set of ground stone tools consists of intensively modified pieces, of which, due to their distinct shape, three pestles are highlighted here. A slightly conical sandstone fragment with a moderately smooth surface (130 × 72 × 60 mm) was found on the surface, corresponding to Wright's (1992) *Unipolar Cylindrical Pestle* (D66) type, a widespread form in the Near East across space and time *(Fig. 2.2)*. The narrow end of the tool bears microfractures that correspond to the function conveyed by the name of the type. The lower part of the object is broken; the blunt, rounded surface indicates ancient damage.

A silicified limestone object (345 × 120 × 102 mm, *Fig. 3.1*), probably also a pestle, came to light in its original position in the Neo-Assyrian room of Trench 4. The elongated silhouette of the tool, widening towards its head, was formed by knapping. The head of the tool is smooth, as is one side along its entire length. At the moment, without microscopic study, we cannot decide whether this section was deliberately smoothed by human hands or it is part of the original cobble cortex. The side opposite this smooth section wears deep, scaled detachment negatives indicating that the piece was formed by intense knapping. The shape of the cross-section of the pestle is plano-convex; the knapped surface has a flat, straight section, while the smoothed part has a more arched delineation from this view. Based on this configuration, we assume that the original raw material was a water-rolled pebble or cobble. The modification of the object is minimal, yet it has resulted in a characteristic form, no exact analogue of which is known to us. The pestle lay on the floor of the room, without any association to a mortar or a quernstone.

One enigmatic find in Trench 4a is a polished granite artefact, also identified as a pestle (213 × 110 × 58 mm, *Fig. 3.2*). Its 'handle' has a narrow blocklike shape that widens into a pentagonal head about halfway through the piece. The front is sanded finer than the back, which is slightly concave. The left half of the head is damaged or intentionally modified: a larger fracture surface is visible on the side, complemented by smaller-scaled fractures along the edge. The fracture surfaces are similar in colour and patination to the rest of the piece, and the edges are rounded, indicating that the damage is not recent. At the bottom of the front of the object, on the handle, two shallow, oval recesses can be observed side by side, measuring 48 × 18 mm and 20 × 18 mm. There is no sign of other modifications, such as handle holes, tapping, or grooves; also, we are unsure whether the bottom end of the 'handle' is broken or whether, conversely, the entire artefact is left to us. The pestle was found in one of the two find concentrations accumulated on the floor of a Neo-Assyrian room in Trench 4a. The concentration apparently consists of household items that may have fallen to the floor from an elevated position in conjunction with the abandonment of the room. In the absence of exact analogues, we cannot decide whether it is a Neo-Assyrian product or an older, recycled tool.

In summary, the finds indicate opportunistic stone tool management with less attention to formal standardization or elaboration of artefacts. However, the use of function-sensitive raw materials and the form and texture preferences exhibited suggest that the lack of elaboration does not in any way indicate the relative insignificance of this object group. Much of the energy invested in making these artefacts was not invested in the preparation phase but in the selection of the right materials and shapes. The *in situ* finds excavated so far, including the pestles presented here, exemplify that seemingly rough-crafted objects may have been specialized elements of diverse and sophisticated household technologies, involving more kinds of artefacts. The example of the pestles also points to an exciting research topic: the significance of the low degree of formal standardization among ground stone tools as regards the socio-economic and cultural characteristics of these communities.

Bibliography

Eitam 2009 — Eitam, D., Late Epipalaeolithic rock-cut installations and groundstone tools in the Southern Levant. Methodology and classification system. *Paléorient*, 35, 2009, 77–104.

Király 2017 — Király, A., Grd-i Tle knapped and ground stone artefacts, excavation seasons 2016–2017. *Dissertationes Archaeologicae ex Instituto Archaeologico Universitatis de Rolando Eötvös nominatae Ser. 3*, 5, 2017, 83–96.

Squitieri 2019 — Squitieri, A., "The Iron Age stone tool assemblage of Gird-i Bazar, in the Kurdish Autonomous Region of Iraq." In Squitieri A. – Eitam D., Eds., *Stone Tools in the Ancient Near East and Egypt: Ground stone tools, rock-cut installations and stone vessels from Prehistory to Late Antiquity*, Oxford, 2019, 210–223

Wright 1992 — Wright, K. I., A Classification System for Ground Stone Tools from the Prehistoric Levant. *Paléorient*, 18, 1992, 53–81.

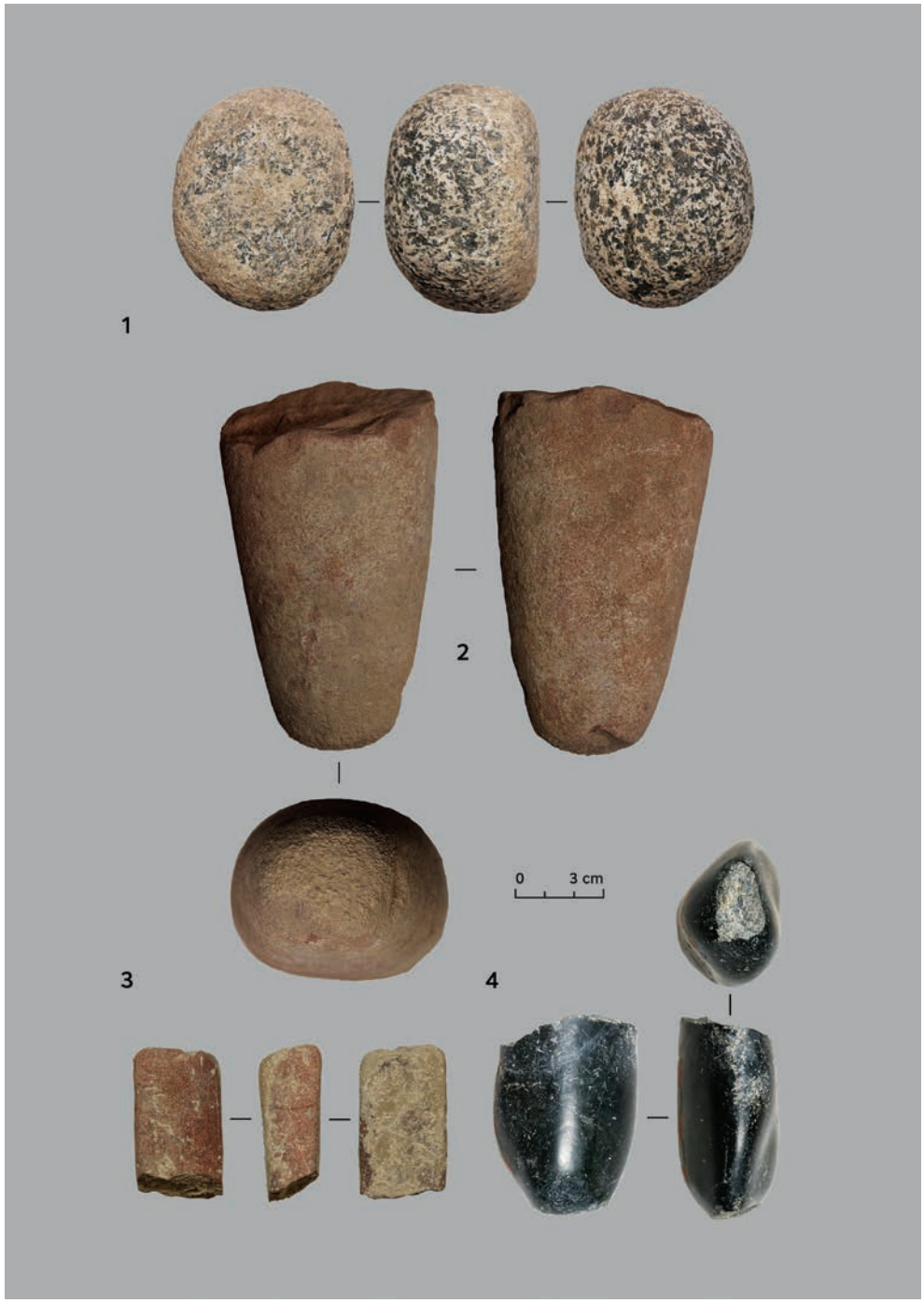

Fig. 2. Grd-i Tle ground or worked stone tools. 1 – metamorphic rock handstone used for pounding and grinding, from a Neo-Assyrian fill layer in Trench 02 (gdt2.052.4.002, Wright 1992 type C35, 75×60×50 mm, 440 g). 2 – sandstone pestle fragment used for pounding, found at the tell's surface (gdt0.9998.4.003, Wright 1992 type D66, 130×72×60 mm, 740 g). 3 – fine sandstone abrader from an *in situ* Neo-Assyrian find concentration in a room of Trench 4a (gdt4a.506.4.004, Wright 1992 type G88, 53×30×22 mm, 63 g). 4 – basalt pounding tool fragment with battering traces on one of its extremities, from a Hellenistic-Parthian fill layer above the Neo-Assyrian building in Trench 4 (gdt4.208.4.002, Wright 1992 type E76, 70×50×33 mm, 161 g). Photos and composition: Attila Király.

Fig. 3. Grd-i Tle ground or worked stone tools. 1 – silicified limestone pestle used for pounding, from the Neo-Assyrian room in Trench 04 (gdt4.216.4.002, Wright 1992 type D74, 345×120×102 mm, 11310 g). 2 – granite (?) pounding tool or pestle, from an *in situ* Neo-Assyrian find concentration in a room of Trench 4a (gdt4a.506.4.014, Wright 1992 type A2, 213×110×58 mm, 3960 g). 3 – conglomerate quern fragment with a strongly concave work surface used for grinding. Found among the stones of a Hellenistic-Parthian structure in Trench 4 (gdt4.204.4.001, Wright 1992 type A2, 144×100×50 mm, 2280 g). Photos and composition: Attila Király.

The Iron Age in the northern Zagros as seen from the Dinka Settlement Complex in the Peshdar Plain

F. Janoscha Kreppner[1], *Karen Radner*[2], *Andrea Squitieri*[3]

Introduction

Not only the transformation processes prompted by various regions' integration into the Neo-Assyrian Empire, but also the makeup of the local Early Iron Age societies prior to the Assyrian presence, have found much attention from archaeologists in recent decades. However, the initial focus of such research was firmly on the northern provinces of the Assyrian Empire in present day south-eastern Turkey and the western provinces in modern Syria, where great advances had been achieved through increased field research, especially from the 1990s onwards.[4] On the other hand, the situation in the eastern provinces remained virtually unknown as no significant field research could be carried out in the Zagros Mountains on Iraqi territory since the 1960s, due to regional and international armed conflict, including the Iran-Iraq War and the three Gulf Wars. As a result, only very limited archaeological data was available on the eastern provinces and the indigenous Early Iron Age societies of the Zagros Mountains.

Field research in the Autonomous Region of Kurdistan in north-eastern Iraq, as it has been undertaken since 2009, can help decisively here.[5] Since 2015, excavations and geophysical prospections conducted by the Peshdar Plain Project in the so-called Bora Plain, located about 3 km south of the modern town of Qaladze, have revealed an extended Iron Age settlement of around 60 ha (judging by the spread of the surface Iron Age pottery), for which the available radiocarbon dates indicates a settlement development from the last quarter of the 13th to the 6th century BC *(Fig. 1)*.[6] Since the ancient name of the settlement is currently unknown and its extent encompasses two previously identified archaeological sites, Gird-i Bazar and Qalat-i Dinka, we call it the Dinka Settlement Complex (DSC) after the larger of the two sites.

The Peshdar Plain

The Peshdar Plain is a narrow, crescent-shaped plain on the upper reaches of the Lower Zab River, bordered by the river on one side and steep mountain ranges at all others. To the east, the plain is

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[3] LMU Munich, Germany and University of Heidelberg, Germany.
[4] Parker 2001, MacGinnis – Wicke 2016.
[5] Kopanias – MacGinnis 2016.
[6] Radner – Kreppner – Squitieri 2016; 2017; 2018; 2019; 2020.

delimited by the *chaîne magistrale* of the Zagros Mountains, which corresponds to the present-day border between Iraq and Iran, whose highest peak is the Kuh-e Ibrahim in the Qandil range with an altitude of 3,587 m. To the west, a sequence of lower mountain ranges consisting of Kukh-i Resh, Shakh-i Asos (up to 1,546 m high) and Kurkur Dagh separate the Peshdar Plain from the Rania Plain, with the impressive gorge of Darband-i Rania (also known as Darband-i Sangasur and Darband-i Ramkan) providing a narrow corridor linking the two regions. The Lower Zab has its source in north-western Iran on the eastern slopes of the Qandil at Piranshar. Running through the Mirabad and Sardasht valleys, the river breaks through the *châine magistrale* of the Zagros at the southern end of the Peshdar Plain, from where it runs in a north-westerly direction along the edge of the Peshdar Plain to the pass at Darband-i Rania. There, the course of the river makes a south-westerly turn in the direction of the Rania Plain and passes through the western foothills of the Zagros before eventually reaching the Mesopotamian Plain, joining the Tigris about 30 km south of the city of Assur. Seen from the Mesopotamian lowlands, the various constituent mountain ranges of the Zagros, running from northwest to southeast, are formidable obstacles that serve to protect the Rania and Peshdar plains from western incursions and also make them difficult to control from there. At the same time, the Lower Zab serves as an important communication route that directly connects the Mesopotamian lowlands with present-day western Iran, with regions east of the formidable *chaîne magistrale* of the Zagros.[7]

East of the *chaîne magistrale*, on the Iranian side of the modern border, archaeological knowledge of the early first millennium BC is still very limited. More recent excavations have mainly opened up smaller excavation areas on citadels,[8] or concentrated on rescue excavations of cemeteries.[9] On the other hand, extended lower towns, as they are a characteristic feature of Iron Age settlements in the better-studied regions, are virtually unknown. The large-scale US and UK excavation projects at Iron Age settlements such as Godin Tepe,[10] Nush-i Jan,[11] and Baba Jan,[12] were discontinued after the Islamic Revolution in 1979, so that data from controlled settlement excavations is very limited for this region. The reference site for the Iron Age chronology of northwestern Iran is still Hasanlu, a site located in the Solduz Plain near Lake Urmia in Iran's West Azerbaijan Province that was excavated between 1956 and 1974.[13] Michael Danti, in the 2013 *Oxford Handbook of Ancient Iran*, recently structured the Iron Age sequence as follows:

Iron Age I (Hasanlu IVc): 1250-1050 BC;
Iron Age II (Hasanlu IVb): 1050-800 BC; and
Iron Age III (Hasanlu IIIc-b): 800-550 BC.[14]

On the Iraqi side, the archaeological Iron Age chronology is closely interwoven with the historical sequence as derived from the textual sources. The ceramic chronology of Arnulf Hausleiter, which is based on material from the Assyrian heartland along the Tigris, uses the following structure:

Neo-Assyrian I: 10th – 9th century BC;
Neo-Assyrian II: 8th – 7th century BC, with the subdivisions:
Neo-Assyrian IIa: 8th century BC;

[7] Radner 2016, 18; Squitieri 2020a.
[8] See in general Hassanzadeh – Vahati – Karimi 2019; and note in particular the site of Rabat Tepe in the Sardasht Plain: Kagar – Binandeh 2009.
[9] Note e.g. the Iron Age cemetery excavated at Sanandaj: Amelirad – Azizi 2021; Radner – Amelirad – Azizi 2020 (with radiocarbon dating).
[10] Gopnik 2011.
[11] Stronach – Roaf 2007.
[12] Goff 1977; 1978; 1985.
[13] Muscarella 2006; Dyson – Voigt 1989.
[14] Danti 2013.

Neo-Assyrian IIb: 7th century BC = "late-Assyrian";

Neo-Assyrian III: end of 7th – 6th/5th century BC = "post-imperial / post-Assyrian".[15]

For the Peshdar Plain, the French surface survey team of the *Mission Archéologique Française du Gouvernorate de Suleimaniah* (MAFGS) led by Jessica Giraud, with Jean-Jacques Herr serving as the pottery expert responsible for the Iron Age ceramics, identified 47 sites that were assigned to the "Neo-Assyrian period" on the basis of surface pottery.[16]

We do not assume that the Dinka Settlement Complex was the administrative centre of the Peshdar Plain in the period of the Assyrian domination of the area, which started in the 9th century BC during the reign of Shalmaneser III (858-824 BC). This function was likely held by the settlement mound located at the heart of the town of Qaladze, identified as the city of Anisu (or Anisus) known from the Assyrian textual sources of the 8th and 7th centuries BC.[17] A recent surface survey undertaken at Qaladze indicates the existence of a settlement of at least 6 ha, including the settlement mound of a height of about 20 m and an extent of 1.7 ha, while some of the surface pottery collected suggests the site's occupation in the Neo-Assyrian period.[18] No excavations have been carried out at the site. The Iron Age layers would be difficult to reach, as they appear to be covered by massive settlement remains of younger date. In addition, the modern city has already covered much of the ancient settlement area.

Apart from the Dinka Settlement Complex, archaeological excavations targeting an Iron Age site in the Peshdar Plain have only taken place at Qalat Said Ahmadan. Situated 5 km northeast of Qaladze, the site is strategically located at the foot of the *chaîne magistrale* of the Zagros in an ideal position to control passage over the mountains. In two excavation campaigns in 2014 and 2015, a Japanese team headed by Akira Tsuneki uncovered on the hilltop the remains of a public building of a length of about 20 m, with 1.3 m wide stone walls. Pottery from Room 2 suggested a dating to the "Neo-Assyrian" period to the excavators, who contemplated the building's identification as a fortress or watchtower, or else as a building of religious character.[19]

The Peshdar Plain Project

The excavation results achieved at the Dinka Settlement Complex so far show that detailed stratigraphic investigations combined with a focused radiocarbon sampling protocol can provide completely new insights into a local material culture and regional lifestyle before, and after, the Assyrian annexation of this particular northern Zagros region. In particular, the results brought to light specific local, and seemingly independent, cultural developments in the Peshdar Plain during the Early Iron Age, which in their material expressions differ from the respective reference systems used in the Mesopotamian Plain of northern Iraq and in the Solduz Plain in northeastern Iran (i.e., Hasanlu).

The Peshdar Plain Project was formed as the result of the chance discovery of a secondarily-fired clay tablet fragment that a farmer had found in 2013 on the western slope of Qalat-i Dinka. When Barzan Baiz Ismail, now director of the more recently established Raparin Directorate of Antiquities, showed this text to Karen Radner in February 2015 during a visit to Rania, she identified it as a Neo-Assyrian sale document for a female slave dated to the year 725 BC in the reign of

[15] Hausleiter 2010, 12-15.
[16] Herr 2018.
[17] Radner 2016, 18. The identification of Qaladze with Anisu(s) was first suggested by Lanfranchi 1995, on the basis of geographical considerations.
[18] D'Agostino *et. al.* 2016, 99.
[19] Tsuneki *et. al*. 2015; 2016.

Shalmaneser V (726-722 BC). Since the document names as a witness to the transaction a subordinate of the Palace Herald, one of the highest-ranking state officials of the Assyrian Empire and the master of a province with a defensive character ("border march") in the east of the empire,[20] this was interpreted as an indication that Qalat-i Dinka was located in the Border March of the Palace Herald that had been founded under Salmanassar III but had hitherto not been precisely located.[21]

Between 2015 and 2019, the Peshdar Plain Project carried out nine excavation campaigns at the Dinka Settlement Complex *(Fig. 2)*.[22] These were closely coordinated with extensive geophysical surveys as well as a dedicated interdisciplinary program for the reconstruction of the paleo-environment. Funding came primarily from the Alexander von Humboldt Foundation and LMU Munich, with additional funds awarded by the Gerda Henkel Foundation, WWU Münster and the Münchener Universitätsgesellschaft. During this time, excavations were conducted in three areas on the western slope of Qalat-i Dinka,[23] where the upper town of the settlement and its fortifications could be identified. Further excavations were undertaken in three areas in the Bora Plain, situated to the east of the Qalat-i Dinka, and provided insight into the extensive lower town of the Iron Age settlement, which is today covered by agricultural land.[24]

Periodisation and available radiocarbon dates

The Dinka Settlement Complex is a so-called 'multi-period site'. In the excavations conducted so far, the settlement of the **Chalcolithic** period is attested by a pottery kiln and a floor, exposed in the excavation area DLT3.[25] Several millennia later, in the **Iron Age**, a much larger settlement covered this Chalcolithic site, and much of the Bora Plain. Architectural remains, ceramics, small finds, as well as human, palaeo-zoological and palaeo-botanical remains dating to the Iron Age were brought to light in all six areas of excavation. Along with the results of the geophysical prospection (by magnetometer and ERT), they reveal a settlement consisting of a fortified upper town and a densely populated lower town. Several centuries later, a disturbed burial excavated in QID1 produced a radiocarbon date range from 355–93 calBC (95.4 % probability),[26] but it is presently impossible to state whether this individual lived in the late Persian period, in Seleucid times or in the early Parthian period.[27] However, the **Sassanid** period is well represented in form of a cemetery covering the Iron Age remains in Gird-i Bazar,[28] although no corresponding settlement has been identified so far. Surface ceramic finds indicate that the site was also used in the Early Bronze Age and the Middle Islamic period,[29] but no funerary or architectural remains associated with these periods have been brought to light so far.

The development of the Iron Age settlement starts in about 1250-1050 BC, according to the testimony of five radiocarbon dates. These derive from the remains of two individuals buried in

[20] Cf. Radner 2008, 49.
[21] Radner 2015; 2016, 18.
[22] Radner – Kreppner – Squitieri 2016; 2017; 2018; 2019; 2020.
[23] Qalat-i Dinka (QID), operations 1–3.
[24] Dinka Lower Town (DLT), operations 1–3, with the excavations at Gird-i Bazar corresponding to "DLT1".
[25] Squitieri *et. al.* 2020.
[26] This and all other radiocarbon dates from the Dinka Settlement Complex mentioned in this paper are calibrated at 95.4% probability, corresponding to ±2σ standard deviation.
[27] Radner 2020, 18: MAMS-36938.
[28] Squitieri 2020b.
[29] Herr – Othman – Salih Ahmed 2019, 110-112; Herr 2020, 89-91.

QID-1,[30] from two carbonised grain seeds excavated in an alley and a courtyard in Gird-i Bazar,[31] and from a charcoal fragment from a secondary context in DLT3.[32]

The majority of available radiocarbon dates – ten in total – fall into the date range of roughly 1050 to 800 BC. The correspondent samples were taken from the floor of Building P in QID1,[33] from the floor of the open area exposed in QID3,[34] from the bottom of a storage vessel in Room 36 of Building L in DLT2 (two samples),[35] and from various well-stratified contexts of the main occupation in Gird-i Bazar (five samples), namely the well in Outdoor Area 7, the oven in Courtyard 21, the floors of Room 3, Room 19, and Room 23;[36] and another well-stratified main occupation context from the floor of Outdoor Area 63 in DLT3.[37] When one combines the results from all excavation areas, from the geophysical survey,[38] and from the surface pottery survey,[39] the Dinka Settlement Complex reached its largest size, of about 60 ha judging by the spread of surface pottery, in this period.

Direct indications of the Assyrian imperial control over this region are provided by the clay tablet documenting a slave sale in the year of the eponym Mahdê (725 BC) in the reign of Shalmaneser V of Assyria (726-722 BC),[40] as well as the fragment of a fired brick with the remainders of a cuneiform inscription that can be ascribed to Shalmaneser III of Assyria (859–824 BC) because of parallels from other sites, found in DLT3.[41]

One of the radiocarbon samples from DLT3 produced the date range of 830–789 calBC.[42] Also two other radiocarbon dates from elsewhere fall into date ranges that cover the Assyrian imperial period but unfortunately also the so-called Hallstatt radiocarbon calibration plateau between ca. 800 and 400 BC where more precise dating is impossible. One sample derives from an individual deposited in the well of Room 49 in Gird-i Bazar,[43] and the other from the human remains of Grave 110 in QID1.[44] This grave featured relatively rich burial goods, and the types of the three fibulae,[45] as well as the manufacturing technique, the motif and the style of the cylinder seal (found complete with a glass cap that allowed to wear it as a pendant)[46] clearly indicate an early dating of Grave 110 within the Hallstatt Plateau sequence to the Neo-Assyrian period.

The Iron Age Dinka Settlement Complex

With the Dinka Settlement Complex, we are certainly dealing with an urbanised settlement. The results from the six operations spread over different functional settlement areas, in combination with the results of the geophysical surveys, show that the settlement consisted of a fortified upper

[30] Radner 2020, 18: MAMS-36939 (1259–1117 calBC), MAMS-43917 (1210 –1029 calBC).
[31] Radner 2020, 18: MAMS-32635 (1215–1055 calBC), MAMS-32638 (1216 –1053 calBC).
[32] Radner 2020, 18: MAMS-41836 (1262–1114 calBC).
[33] Radner 2020, 18: MAMS-36674 (1001–847 calBC).
[34] Radner 2020, 18: MAMS-36673 (1043–850 calBC).
[35] Radner 2020, 18: MAMS-34635 (1012–856 calBC), MAMS-34636 (930–824 calBC).
[36] Radner 2020, 18: MAMS-33610 (1006–901 calBC), MAMS-32636 (971–834 calBC), UGAMS-23213 (972–829 calBC), MAMS-32637 (971–831 calBC), MAMS-32639 (906–816 calBC).
[37] Radner 2020, 18: MAMS-45236 (1042–833 calBC).
[38] Fassbinder – Ašandulesi – Scheiblecker 2018.
[39] Giraud 2016, 29.
[40] Radner 2015; 2016, 17–18, the fragmentary Neo-Assyrian slave sale contract dates to 725 BC in the reign of Shalmaneser V (726–722 BC).
[41] Radner 2019, 137–139.
[42] Radner 2020, 18: UGAMS-23561.
[43] Radner 2020, 18: MAMS-33609 (748–409 calBC).
[44] Radner 2020, 18: MAMS-43951 (767–488 calBC).
[45] Pedde 2020, 112-114: E2.1.
[46] Fügert 2020, 116: E3.2.

town on the western slope of Qalat-i Dinka, and a large lower town spreading across the Bora Plain at the foot of the eastern slope of Qalat-i Dinka. The area between Gird-i Bazar and Qalat-i Dinka was densely covered with buildings that are separated by streets and alleys. The road system and blocks of buildings are oriented and organized in a semicircle with Qalat-i Dinka as its centre. It has been clearly established that this lower town was not enclosed by a wall – the mountain ranges and the course of the Lower Zab encircling the crescent-shaped Bora Plain seemingly offered enough protection.

On the western slope of Qalat-i Dinka, a quarter-circle anomaly was visible on the magnetogram, that was investigated in two trenches *(Fig. 2, 3)*. Most of the trench QID2 was taken up by the remains of a sloping stone structure that rises 2 m in height over 7 m in length. We interpret it as a glacis, a feature frequently used in antiquity to reinforce the outer face of defensive walls. Located at a distance of 40 m from QID2, the trench QID3 revealed the remains of a long wall made of loosely assembled stones, employing a building technique that markedly differs from that used for the walls of all buildings hitherto excavated at the Dinka Settlement Complex. The stones of this construction were embedded in dark brown soil, onto which walking surfaces of the adjoining outer areas abutted. We interpret this feature as earthen rampart, on which a palisade may have originally provided protection for the upper town.

Within the fortified area of Qalat-i Dinka, an area of ca. 200 m^2 has been exposed, dubbed QID1 *(Fig. 4)*. Our work uncovered the remains of large building of impressive dimensions ("Building P"), with wide stone walls featuring stone pilasters and a paved floor of alternating baked bricks and stone slabs. Its monumentality sets this building apart from those unearthed so far in the Lower Town, including the large-scale architecture exposed in DLT2. Modern looting pits severely damaged the entire building, and also its floor, and the building's fill was therefore contaminated with much modern material left by the looters.

The outdoor area surrounding Building P was constructed with gravel packages that follow the contours of the natural slope of Qalat-i Dinka, sloping from northeast to southwest. Here, remains of a number of graves were found, which were heavily disturbed by looting. Due to the extensive destruction of the context, it has not been possible to observe a precise stratigraphic sequence. It is therefore unclear whether any graves predate the construction, or date to a time after the building was no longer used, and it is equally impossible to determine whether any of the burials were deposited while Building P was in use. As the graves were originally richly equipped with valuable finds, they were specifically targeted by the looters. Therefore, only in some graves, finds could be recovered in their original context, most prominently in Grave 110 whose top half was intact when found. A large number of finds originate from the fillings of looting pits, making it impossible to assign them to specific burials. Although we must assume that much was taken by the looters, the preserved find repertoire nevertheless includes one completely preserved bronze bowl (of a diagnostic shape that dates the object to the late 8th century BC or later), five fibulae (some of which are typical 7th century shapes) and three cylinder seals with designs popular also elsewhere in the Assyrian Empire. These finds indicate the presence of elites in Qalat-i Dinka.

If we turn to the lower town, an area of about 1,100 m^2 was exposed in Gird-i Bazar (i.e., DLT1). In the west of this area, six buildings were unearthed, separated by and accessible from narrow alleys *(Fig. 5)*. Of these, two were completely excavated: Building F/D covers about 150 m^2, and Building H/I about 120 m^2. The discovery of three ceramic kilns, of the pivot stone of a slowly rotating potter's wheel and other finds connected to pottery production indicate the existence of ceramic workshops in this part of the Dinka Settlement Complex. The houses at Gird-i Bazar were also homes, as they feature the essential installations needed for everyday life such as wells for accessing fresh water, drains to carry waste water into the alleys, and bread ovens. To the east of these houses lies a large

open space, and beyond it are further buildings of a similar layout, of which Building A was unearthed most extensively, covering an area of about 150 m^2.

In DLT3, an area of 80 m^2 was excavated that brought to light buildings and rooms with small-scale stone architecture and a pottery inventory that closely matched what was already known from Gird-i Bazar *(Fig. 6)*. However, unlike in Gird-i Bazar, two successive construction phases could be observed in Buildings Q and S, as a part of Building Q was partly covered by Building S, which was built in the more recent construction phase. Presumably, this reflected a changing need in the space requirements. The adjoining Building R, on the other hand, remained unchanged and was in continuous use throughout the same time.

Also situated in the lower town, but in an elevated and spatially distanced from the rest of the settlement is a complex of three larger buildings, which was first observed in the 2016 magnetogram. In spring 2017, a first test trench was excavated in this area, dubbed DLT2 *(Fig. 7)*. The results confirmed that building features exposed by excavation matched those observed in the magnetogram and further indicated that well-preserved building remains could be expected only 20-25 cm below the modern surface, i.e. directly below the ploughing zone. The magnetogram revealed that the extent of Buildings K (ca. 280 m^2), L (ca. 700 m^2) and M (ca. 650 m^2) was significantly larger than other recognisable architectural units in the lower town. Already their position and their size therefore suggested the complex' importance within the settlement. This hypothesis was supported by the results of the initial excavation. Room 35 in the largest Building L is a storage room and contains very large storage vessels arranged in two rows along the long sides of the room (see below). Two charred seeds of emmer (*triticum dicoccum*) from the bottom of one of these vessels (L37), from the northern corner of the room, yielded radiocarbon date ranges of 1012–894 calBC and 930–824 calBC, which match the majority of radiocarbon dates available for Gird-i Bazar and Qalat-i Dinka. This indicates that the buildings in these three different areas of the settlement, both within the hilltop fortification and the lower town, were in use simultaneously. This is also supported by the ceramic inventories recovered from the floors of the DLT2 buildings, which match the pottery found in Gird-i Bazar in terms of ware, form and production technique, according to macroscopic and petrographic analyses.

The floors of the three buildings lie approximately 1.5 m below the ground surface. Since the floors of the alleyways between the houses abutted the walls of the buildings, we can assume that the buildings were occupied during a common phase of use. Further ploughing of the site poses an immediate threat to the archaeological features, and funding was therefore sought to unearth these structures, which was eventually awarded to Janoscha Kreppner by the Deutsche Forschungsgemeinschaft (DFG).

Due to the COVID-19 pandemic, excavations could only commence in autumn 2021 and currently target Building L. The building's layout is almost square with a side length of 25-27m, covering an area of about 700 m^2. Three 10 × 10 m squares were opened in the north of the building while its south was explored with the help of five parallel test trenches of a width of 2 m and a length of 20 m. The 2021 excavation managed to reveal the basic organisation of the building, which includes a representative entrance in the southeast, a large grain storage facility in the northeast, an imposing reception room in the northwest, and presumably living space in the southwest, although this part of the building is located in the area only investigated by the test trenches.

At the centre of the building lies the squarely-shaped Courtyard 75, which covers an area of approximately 210 m^2. Along the walls lining the courtyard, an area of a width of about 1.7 m is demarcated by a row of carefully-placed stones set into the floor, and square stone bases are placed at regular intervals. These stone bases may have supported wooden pillars that in turn supported a portico encircling the courtyard. It is therefore likely that only the central area of the courtyard was unroofed. The courtyard is bordered by rooms or suites of rooms on each of its four sides.

The threshold in the passageway leading from Room 80 to the central courtyard, formed by a huge stone that is now broken in half, highlights the importance of this access route. We therefore interpret Room 80 as a vestibule and assume that the main entrance to Building L was situated in its southeast.

In the northwest of Building L lies Room 37, which stands out due to its large size of about 60 m^2. Accessible from the courtyard by an entrance with a burnt brick threshold, the room has a podium-like raised area at its northeastern end, and its white lime plaster floor is largely preserved. This room can be identified as the building's reception room.

Room 35 lies to the northeast of the courtyard and is accessible from there through a centrally-placed entrance. The northern corner of this storage room was exposed already in 2017, and the two carbonised seeds that were radiocarbon-dated were derived from the bottom of one of the storage vessels found there. During the 2021 campaign, the entire room of a size of about 48 m^2 was exposed, with large pithos-type vessels lining the long sides of the room in two rows. Several of these storage jars had geometric appliqué decorations, with raised triangular shapes decorated by patterns formed of round impressions.

Conclusions

Dinka Settlement Complex shows a settlement development that, according to the available radiocarbon dates, covers the entire Iron Age sequence. Whereas for Hasanlu – the key site for the chronology of northwestern Iran – the division into Iron Age I, II and III is based on drastic changes observed in the material culture and in the settlement organisation (as witnessed by the successive building phases), we can only distinguish one main occupation period at the Dinka Settlement Complex, dating to the early first millennium BC. It can be subdivided into the sub-phases Main Occupation Period 1 and 2 because of slight structural changes with simultaneous continuities in the building structures observed in Gird-i Bazar (DLT1) and DLT3.

When aligned to the absolute chronological dates of the northwest Iranian chronology, the Main Occupation period of the Dinka Settlement Complex corresponds most closely to Iron Age II (1050–800 BC) according to the current state of knowledge. In to northern Mesopotamian chronology, the Main Occupation period would correspond to the Neo-Assyrian I period (10th/9th century BC).

Even though the data available for specific periods within the Iron Age is unevenly distributed at the Dinka Settlement Complex and overwhelmingly favours the early first millennium BC, we can presently not discern any drastic changes in material culture that would necessitate a division into Iron Age I, II and III. Apart from some of the small finds recovered from the funerary contexts of QiD1, the material remains recorded so far in the excavations show hardly any obvious Assyrian influence. This is striking since the site produced two Assyrian textual documents, the inscribed brick likely dating to the reign of Shalmaneser III (late 9th century BC) and the slave sale contract dating to the reign of Shalmaneser V (725 BC).

Instead, the material culture of the Dinka Settlement Complex seems to be deeply rooted in local traditions. So far, no significant type fossils for the production and consumption of ceramics have been found that Bradley Parker deemed indicative as an integral part of Assyrian imperial presence in his 2001 book *The Mechanics of Empire: The Northern Frontier of Assyria as a Case Study in Imperial Dynamics*.[47]

[47] Parker 2001, 283–285: "NA Type 1: Hammerhead Bowl" "NA Type 2: In-dented Rim Bowl", "NA Type 3: Nipple Base", "NA Type 4: Ring Collar Jar" and "NA Type 5: Fine Ware ("Palace Ware")".

The pottery production identified in the houses of Gird-i Bazar likely served the community of the entire Dinka Settlement Complex. The majority of vessel shapes are hemispheric bowls, carinated bowls, jars and cooking pots while lids, trays, stands and tripods are also attested, but more rarely.[48] Most of fabrics used are medium-coarse to medium-fine.[49] The pottery was created by a combination of coiling, slow-wheel and burnishing techniques, and a red slip was applied in many cases. The shapes and techniques connect the pottery to the material culture attested in the wider northern Zagros region, including the Rania Plain and the Shahrizor Plain in Iraqi-Kurdistan as well the Solduz Plain (Hasanlu), the Sardasht Plain (Rabat Tepe), the Kangavar valley (Godin Tepe) and the Delfan Plain (Baba Jan Tepe) in northwestern Iran. The resemblance to the Assyrian ceramic production is far less pronounced.

Local Zagros traditions are also prominent in the architecture of the Dinka Settlement Complex, both in terms of building techniques and ground plans. While the typical ground plan for Assyrian residential and palace architecture ("Hofhaus mit vorgelagertem Empfangsraum")[50] is well attested in the western and northern provinces of the Assyrian Empire, both on citadels and in lower towns, this building type was not identified at the Dinka Settlement Complex, neither in the excavations nor in the geophysical prospection. We have already emphasised the absence of a fortification wall surrounding the Dinka Settlement Complex's lower town (which is a typical feature of many Assyrian lower towns) but one also needs to bear in mind that the excellent natural defences of the site, as provided by the Zab and the mountains encircling the Bora Plain, may have been deemed entirely sufficient.

In conclusion, the archaeological finds and features of the Dinka Settlement Complex are particularly interesting as they are representative of the local Zagros cultural tradition of the early first millennium BC. It is remarkable that the integration of the Dinka Settlement Complex into the Neo-Assyrian Empire in the second half of the 9th century BC does not find a material expression in the architecture and pottery that would match what is known from the results of excavations in the northern Assyrian provinces on the Upper Tigris (today southeastern Turkey),[51] from the western provinces on the Euphrates (today Syria),[52] and also from Yasin Tepe in the Shahrizor Plain, south-east of Sulaymaniyah.[53]

For the Neo-Assyrian Empire, the importance of the local elements in the imperial peripheries, border areas and regions outside the sphere of direct control has been emphasised only relatively recently in the 2018 volume *Imperial Peripheries in the Neo-Assyrian Period*, edited by Craig Tyson and Virginia Herman, whose contributions analysed a range of peripheral phenomena in interaction with the imperial centre.[54] Approaching the novel, and unexpected, Iron Age settlement type documented in the form of the well-preserved Dinka Settlement Complex will be a research task for the coming years.

[48] Herr 2016; 2017.
[49] Amicone 2017.
[50] Miglus 1999, 175.
[51] Parker 2001.
[52] MacGinnis – Wicke 2016.
[53] Nishiyama 2020.
[54] Tyson – Herrmann 2018.

Bibliography

Amelirad – Azizi 2021 Amelirad, S. – Azizi, E., "Kani Koter, Iron Age Cemetery from Iranian Kurdistan". *Iran* 59/1 (2021), 57–76.

Amicone 2017 Amicone, S., "Petrographic Analysis of the 2015–2016 Pottery from Gird-i Bazar". In: Radner, K. – Kreppner, F. J. – Squitieri, A., eds., *Unearthing the Dinka Settlement Complex: The 2016 Season at Gird-i Bazar and Qalat-i Dinka,* (Peshdar Plain Project Publications 2), Gladbeck 2017, 128–138.

D'Agostino et al. 2016 D'Agostino, A. – Eidem, J. – Giannessi, D. – Mazzoni, S. – Orsi, V. – Rasheed Raheem, K., "Archaeological Survey of Qaladze (Sulaymania Governorate, Iraq), 2013". *Anatolica* 42 (2016), 77–110.

Danti 2013 Danti, M., "The Late Bronze and Early Iron Age in Northwestern Iran". In: Potts, D. T., ed., *The Oxford Handbook of Ancient Iran*. Oxford 2013, 327–376.

Dyson – Voigt 1989 Dyson, R. H. – Voigt, M. M., eds., *East of Assyria: The Highland Settlement of Hasanlu*. Expedition 31/2-3 (special issue), 1989.

Fassbinder – Ašandulesi – Scheiblecker 2018 Fassbinder, J. – Ašandulesi, A. – Scheiblecker, M., "The 2017 Magnetometer Survey of the Dinka Settlement Complex". In: Radner, K. – Kreppner, F. J. – Squitieri, A., eds., *The Dinka Settlement Complex 2017: The final season at Gird-i Bazar and first work in the Lower Town*. (Peshdar Plain Project Publications 3). Gladbeck 2018, 20–30.

Fügert 2020 Fügert, A., "Three Cylinder Seals from Qalat-i Dinka (QID1), 2019". In: Radner, K. – Kreppner, F. J. – Squitieri, A., eds., *The Dinka Settlement Complex 2019: Further Archaeological and Geophysical Work on Qalat-i Dinka and the Lower Town*, (Peshdar Plain Project Publications 5), Gladbeck 2020, 115–117.

Giraud 2016 Giraud, J., "Surface Survey of the Dinka Settlement Complex, 2013 and 2015". In: Radner, K. – Kreppner, F. J. – Squitieri, A., eds., *Unearthing the Dinka Settlement Complex: The 2016 Season at Gird-i Bazar and Qalat-i Dinka,* (Peshdar Plain Project Publications 1), Gladbeck 2016, 29–35.

Goff 1977 Goff, C., "Excavations at Baba Jan: The Architecture of the East Mound, Levels II and III". *Iran* 15, 1977, 103–140.

Goff 1978 Goff, C., "Excavations at Baba Jan: The Pottery and Metal from Levels III and II". *Iran* 16 (1978), 29–65.

Goff 1985 Goff, C., "Excavations at Baba Jan: The Architecture and Pottery of Level I". *Iran* 23 (1985), 1–11.

Gopnik – Rothman 2011 Gopnik, H. – Rothman, M., eds., *On the High Road: The History of Godin Tepe, Iran*. Toronto 2011.

Hausleiter 2010 Hausleiter, A., *Neuassyrische Keramik im Kerngebiet Assyriens: Chronologie und Formen*. Wiesbaden 2010.

Hassanzadeh – Vahati – Karimi 2019 Hassanzadeh, Y. – Vahati, A. A. – Karimi, Z., eds., *Proceedings of the International Conference on the Iron Age in Western Iran and Neighbouring Regions*. Teheran and Sanandaj, 2019.

Herr 2016 Herr, J.-J., "The Pottery from Gird-i Bazar, 2015: A Preliminary Study". In: Radner, K. – Kreppner, F. J. – Squitieri, A., eds., *Exploring the Neo-Assyrian Frontier with Western Iran: The 2015 Season at Gird-i Bazar and Qalat-i Dinka*, (Peshdar Plain Project Publications 1), Gladbeck 2016, 80–99.

Herr 2020 Herr, J.-J., "The 2019 Pottery from Qalat-i Dinka (QID1)". In: Radner, K. – Kreppner, F. J. – Squitieri, A., eds., *The Dinka Settlement Complex 2019: Further Archaeological and Geophysical Work on Qalat-i Dinka and the Lower Town*, (Peshdar Plain Project Publications 5), Gladbeck 2020, 86–92.

Herr – Othman – Salih Ahmed 2019 Herr, J.-J., – Othman, A. B. – Salih Ahmed, H., "The 2018 Pottery from the Dinka Settlement Complex". In: Radner, K. – Kreppner, F. J. – Squitieri, A., eds. *The Dinka Settlement Complex 2018: Continuing the excavations at Qalat-I Dinka and the Lower Town,* (Peshdar Plain Project Publications 3), Gladbeck 2018, 99–123.

Herr 2017 Herr, J.-J., "The 2016 Season Pottery and a First Catalogue of the *Chaînes Opératoires* at Gird-i Bazar". In Radner, K. – Kreppner, F. J. – Squitieri, A., eds., *Unearthing the Dinka Settlement Complex: The 2016 Season at Gird-i Bazar and Qalat-i Dinka, (*Peshdar Plain Project Publications 2), Gladbeck 2017, 104–127.

Herr 2018 Herr, J.-J., "Neo-Assyrian Settlements in Rania, Peshdar and Bngird". In: Salisbury, R. – Höflmayer, F. – Bürge, T., eds., *Proceedings of the 10th International Congress on the Archaeology of the Ancient Near East, vol*. 2. Wiesbaden 2018, 97–112.

Kagar – Binandeh 2009 Kargar, B. – Binandeh, A., "A Preliminary Report of Excavations at Rabat Tepe, Northwestern Iran". *Iranica Antiqua* 44 (2009), 113–129.

Kopanias – MacGinnis 2016 Kopanias, K. – MacGinnis, J., eds., *The Archaeology of the Kurdistan Region of Iraq and Adjacent Regions*. Oxford 2016.

Lanfranchi 1995 Lanfranchi, G. B., "Assyrian Geography and Neo-Assyrian Letters: The Location of Hubushkia Again". In: Liverani, M., eds., *Neo-Assyrian Geography*. Rome 1995, 127–137.

MacGinnis – Wicke 2016 MacGinnis, J. – Wicke, D. – Greenfield, T., eds., *The Provincial Archaeology of the Assyrian Empire*. Oxford 2016.

Miglus 1999 Miglus, P., *Städtische Wohnarchitektur in Babylonien und Assyrien*. Mainz am Rhein 1999.

Muscarella 2006 Muscarella, O. W., "The Excavation of Hasanlu: An Archaeological Evaluation", *Bulletin of the American Schools of Oriental Research* 342, 2006, 69–94.

Nishiyama 2020 Nishiyama, S., "Provincial Control in the Eastern Reaches of the Assyrian Empire: A View from Yasin Tepe, Iraqi Kurdistan". In: Hasegawa, S. – Radner, K., eds., *The Reach of the Assyrian and Babylonian Empires: Case Studies in Eastern and Western Peripheries*. Wiesbaden 2020, 45–72.

Parker 2001 Parker, B. J., *The Mechanics of Empire: The Northern Frontier of Assyria as a Case Study in Imperial Dynamics*. Helsinki 2001.

Pedde 2020 — Pedde, F., "Five Fibulae from Qalat-i Dinka (QID1), 2019". In: Radner, K. – Kreppner, F. J. – Squitieri, A., eds., *The Dinka Settlement Complex 2019: Further Archaeological and Geophysical Work on Qalat-i Dinka and the Lower Town*, (Peshdar Plain Project Publications 5), Gladbeck 2020, 115–117.

Radner 2008 — Radner, K., "Provinz, C: Assyrien", *Reallexikon der Assyriologie und Vorderasiatischen Archäologie* 11, 2008, 42–68.

Radner 2015 — Radner, K., "A Neo-Assyrian Slave Sale Contract of 725 BC from the Peshdar Plain and the Location of the Palace Herald's Province". *Zeitschrift für Assyriologie und Vorderasiatische Archäologie* 105 (2015), 192–197.

Radner 2016 — Radner, K., "The Peshdar Plain in the Neo-Assyrian Period: The Border March of the Palace Herald". In: Radner, K. – Kreppner, F. J. – Squitieri, A., eds., *Exploring the Neo-Assyrian Frontier with Western Iran: the 2015 Season at Gird-i Bazar and Qalat-i Dinka,* (Peshdar Plain Project Publications 1), Gladbeck 2016, 17–22.

Radner 2020 — Radner, K., "The Peshdar Plain Project in its Fifth Year: The 2019 Work Programme". In: Radner, K., – Kreppner, F. J. – Squitieri, A., eds., *The Dinka Settlement Complex 2019: Further Archaeological and Geophysical Work on Qalat-i Dinka and the Lower Town*, (Peshdar Plain Project Publications 5), Gladbeck 2020, 13–23.

Radner – Amelirad – Azizi 2020 — Radner, K. – Amelirad, S. – Azizi, E., "A First Radiocarbon Date for the Iron Age Cemetery of Sanandaj: Dating an Elite Burial in the Assyrian Province of Parsua". In: Hasegawa, S. – Radner, K., eds., *The Reach of the Assyrian and Babylonian Empires: Case Studies in Eastern and Western Peripheries*. Wiesbaden 2020, 95–109.

Radner – Kreppner – Squitieri 2016 — Radner, K. – Kreppner, F. J. – Squitieri, A., eds., *Exploring the Neo-Assyrian Frontier with Western Iran: The 2015 Season at Gird-i Bazar and Qalat-i Dinka*, (Peshdar Plain Project Publications 1), Gladbeck 2016. DOI: 10.5282/ubm/epub.29236

Radner – Kreppner – Squitieri 2017 — Radner, K. – Kreppner, F. J. – Squitieri, A., eds., *Unearthing the Dinka Settlement Complex: The 2016 Season at Gird-i Bazar and Qalat-i Dinka*, (Peshdar Plain Project Publications 2), Gladbeck 2017. DOI: 10.5282/ubm/epub.40252

Radner – Kreppner – Squitieri 2018 — Radner, K. – Kreppner, F. J. – Squitieri, A., eds., *The Dinka Settlement Complex 2017: The Final Season at Gird-i Bazar and First Work in the Lower Town*, (Peshdar Plain Project Publications 3), Gladbeck 2018. DOI: 10.5282/ubm/epub.57255

Radner – Kreppner – Squitieri 2019 — Radner, K. – Kreppner, F. J. – Squitieri, A., eds., *The Dinka Settlement Complex 2018: Continuing the Excavations at Qalat-i Dinka and the Lower Town*, (Peshdar Plain Project Publications 4), Gladbeck 2019. DOI: 10.5282/ubm/epub.68561

Radner – Kreppner – Squitieri 2020
Radner, K. – Kreppner, F. J. – Squitieri, A., eds., *The Dinka Settlement Complex 2019: Further Archaeological and Geophysical Work on Qalat-i Dinka and the Lower Town*, (Peshdar Plain Project Publications 5), Gladbeck 2020. DOI: 10.5282/ubm/epub.74269

Squitieri 2020a
Squitieri, A., "Towards an Understanding of the Assyrian Empire's Defence Strategies in the East: A Case Study from the Peshdar Plain (Dinka Settlement Complex and Gawr Miran)". In: Hasegawa, S. – Radner, K., eds., *The Reach of the Assyrian and Babylonian Empires: Case studies in Eastern and Western Peripheries*. Wiesbaden 2020, 111–136.

Squitieri 2020b
Squitieri, A., "The Sasanian Cemetery of Gird-i Bazar in the Peshdar Plain (Iraqi Kurdistan)". *Iran* 60/1, 73-90 DOI: 10.1080/05786967.2020.1749008.

Squitieri et al. 2020
Squitieri, A., – Altaweel, M. – Amicone, S. – Herr, J.-J. – Pietsch, S. – Rohde, J., "A Chalcolithic Kiln in the Bora Plain". In: Radner, – Kreppner, F. J. – Squitieri, A., eds., *The Dinka Settlement Complex 2019: Further Archaeological and Geophysical Work on Qalat-i Dinka and in the Lower Town*, (Peshdar Plain Project Publications 5), Gladbeck 2020, 190–200.

Stronach – Roaf 2007
Stronach, D. – Roaf, M., *Tepe Nush-i Jan 1: The Major Buildings of the Median Settlement.* London: The British institute of Persian Studies, 2007.

Tsuneki et al. 2015
Tsuneki, A. – Rasheed, K. – Saber, S. A. – Nishiyama, S. – Anma, R. – Ismail, B. B. – Hasegawa, A. – Tatsumi, Y. – Miyauchi, Y. – Jammo, S. – Makino, M. – Kudo, Y. ,"Excavations at Qalat Said Ahmadan, Slemani, Iraq-Kurdistan: First Interim Report (2014 Season)". *Al-Rafidan* 36, 2015, 1–63.

Tsuneki et al. 2016
Tsuneki, A. – Rasheed, K. – Saber, S. A. – Nishiyama, S. – Watanabe, N. – Greenfield, T. – Ismail, B. B. – Tatsumi, Y. – Minami, M. "Excavations at Qalat Said Ahmadan, Qaladizah, Iraq-Kurdistan: Second Interim Report (2015 Season)". *Al-Rafidan* 37, 2016, 89–142.

Tyson – Herrmann 2018
Tyson, C. W. – Herrmann, V. H. R., eds., *Imperial Peripheries in the Neo-Assyrian Period*. Louisville 2018.

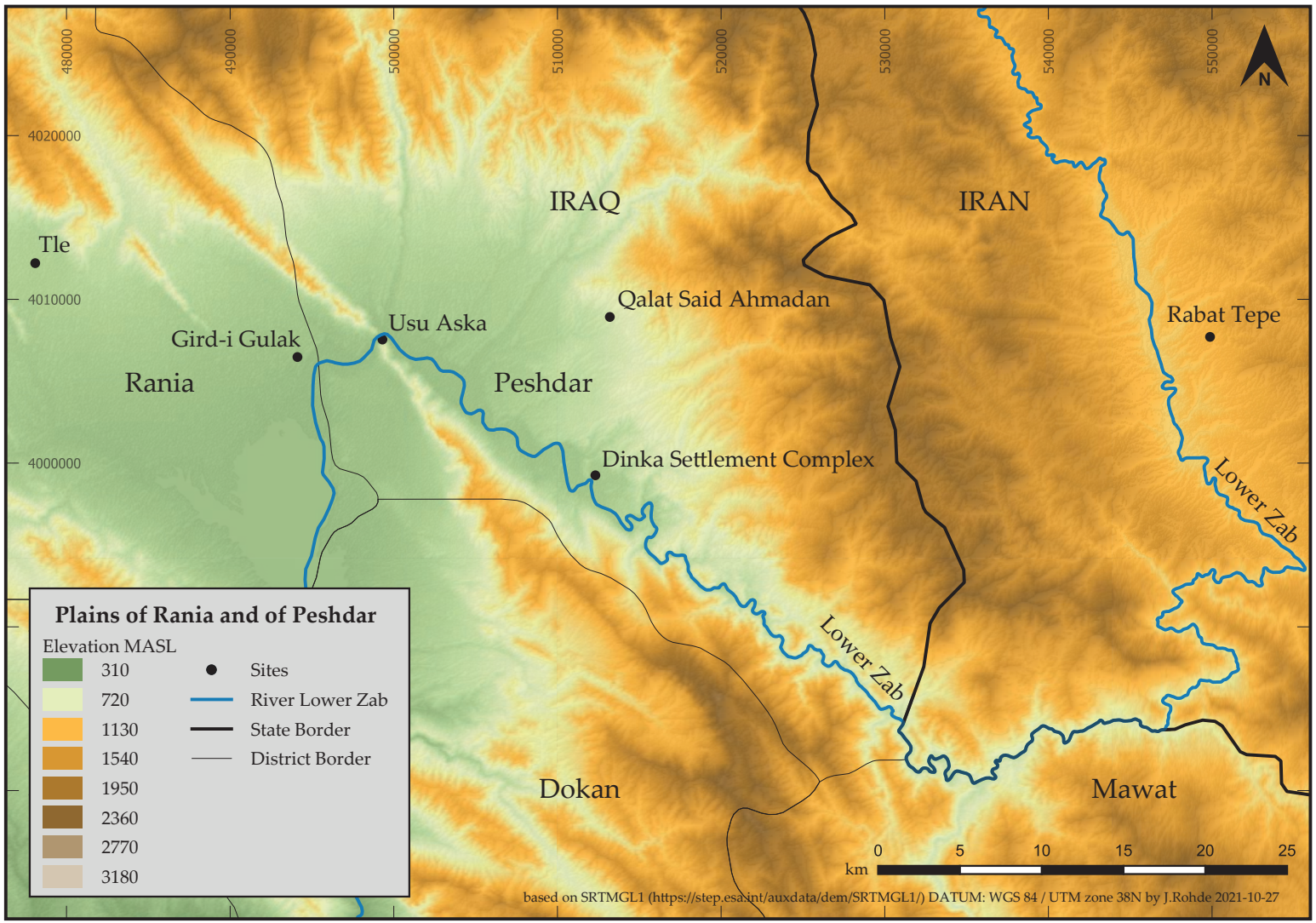

Fig. 1: Map of the Peshdar Plain. Prepared by Jens Rohde.

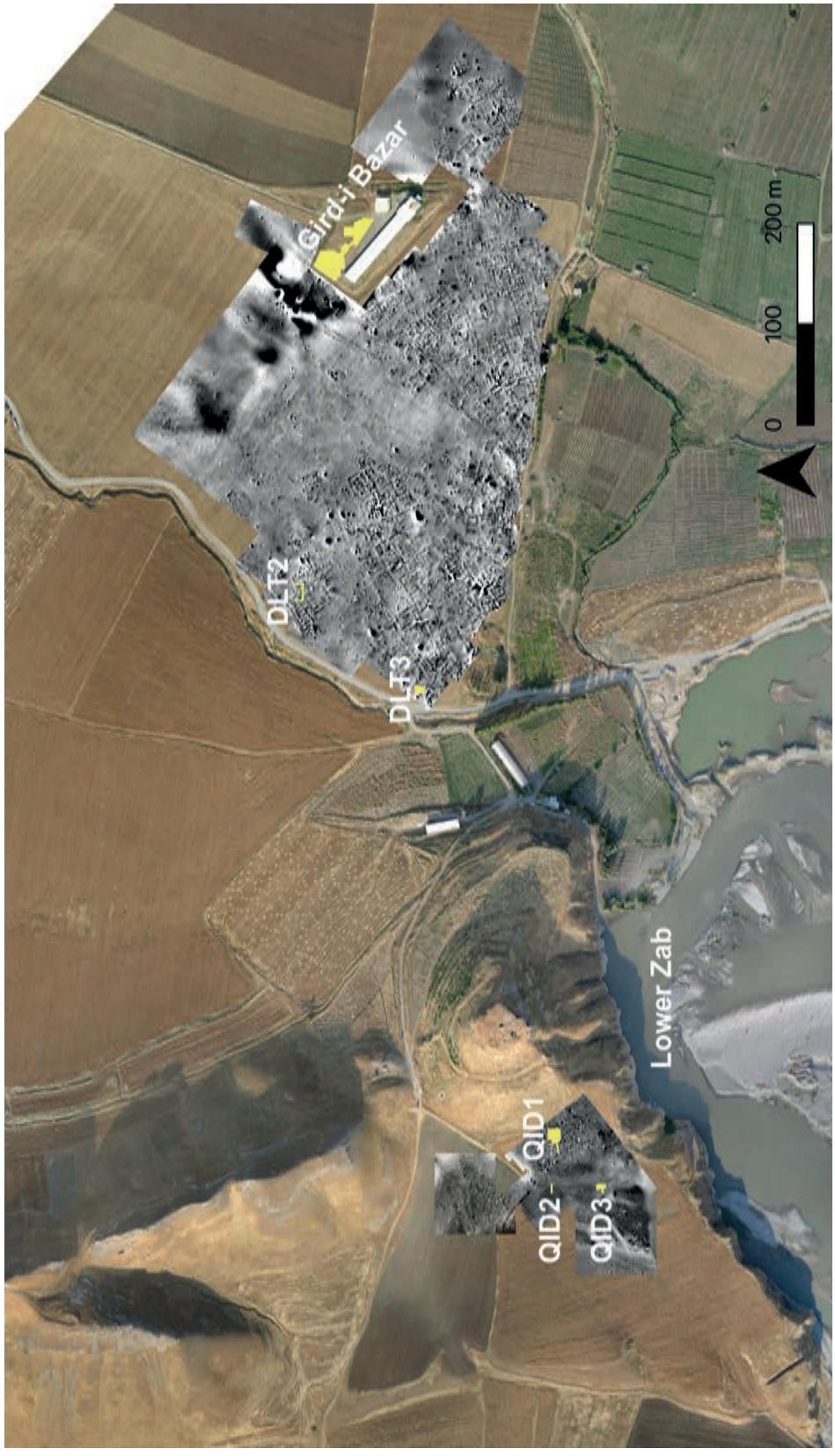

Fig. 2: The Dinka Settlement Complex, overlaid with the magnetograms produced by Jörg Fassbinder and his team since 2015. Marked in yellow, the operations Gird-i Bazar (= DLT1), DLT2, DLT3, QID1, QID2 and QID3. Detail of a drone image created by ICONEM (Paris; http://iconem.com), courtesy of Un Film à la Patte (Strasbourg; http://www.unfilmalapatte.fr) and Jessica Giraud. Prepared by Andrea Squitieri.

Fig. 3: The western slope of Qalat-i Dinka with the three trenches QID1, QID2 and QID3 opened in spring 2018. In the background, the poultry farm of Gird-i Bazar is visible. Photo taken by Andrea Squitieri with a DJI Phantom 4 Pro drone.

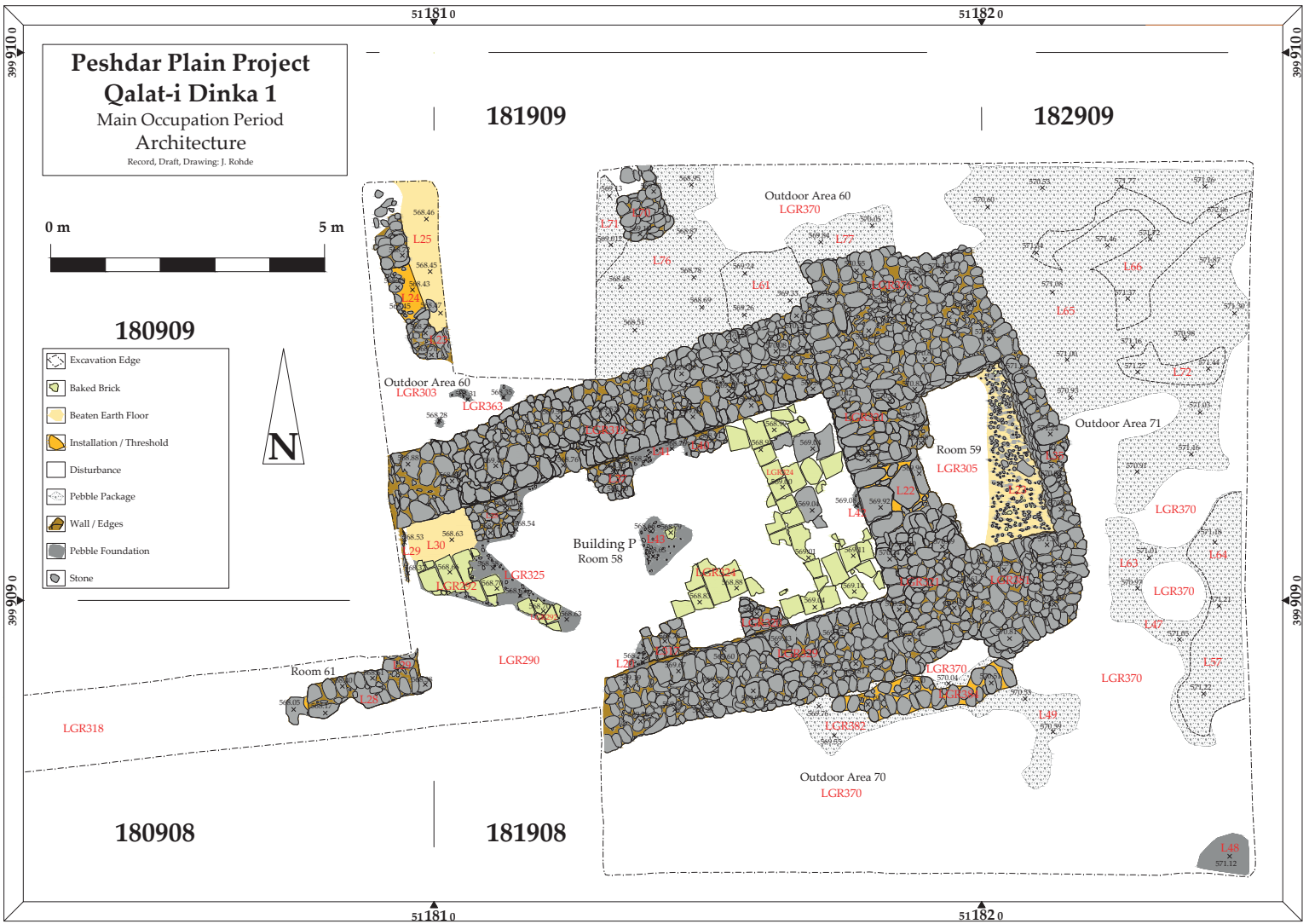

Fig. 4: Building P in QID1: plan of the "Main Occupation Period" phase. Prepared by Jens Rohde.

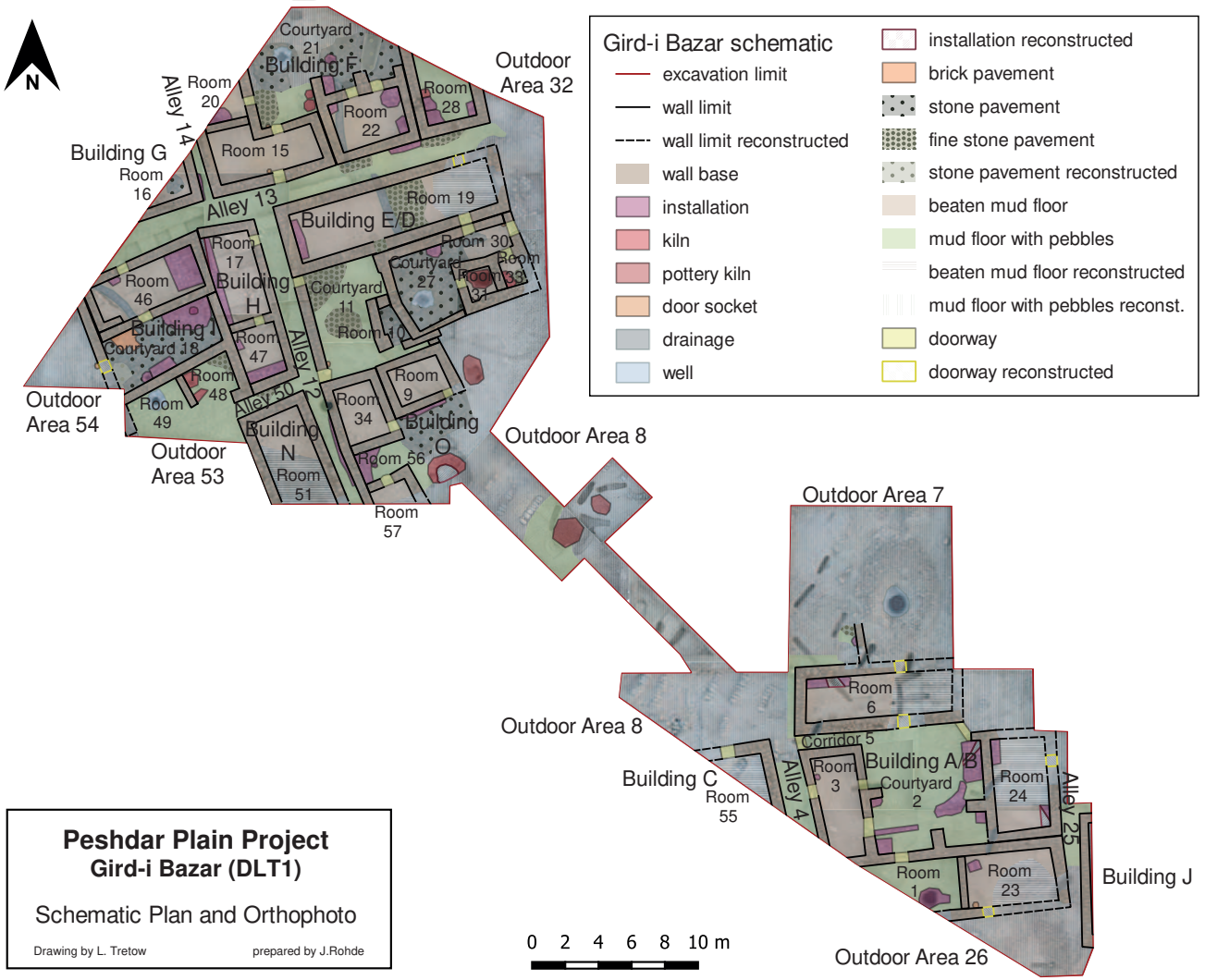

Fig. 5: Orthophoto with a schematic plan of the buildings of Gird-i Bazar (DLT1). Prepared by Jens Rohde and Laura Tretow.

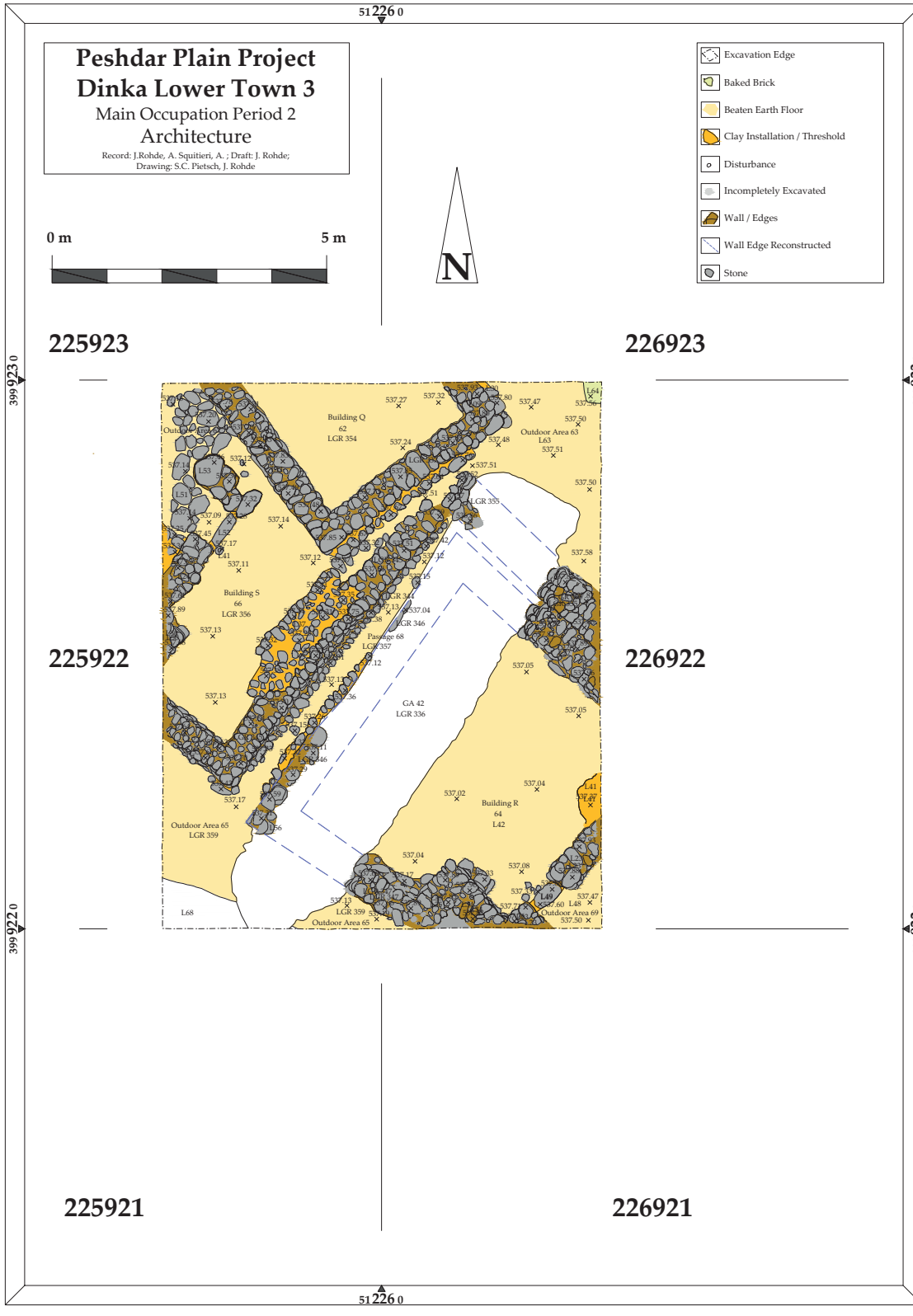

Fig. 6: Plan of the "Main Occupation Period 2" levels in DLT3. Prepared by Jens Rohde.

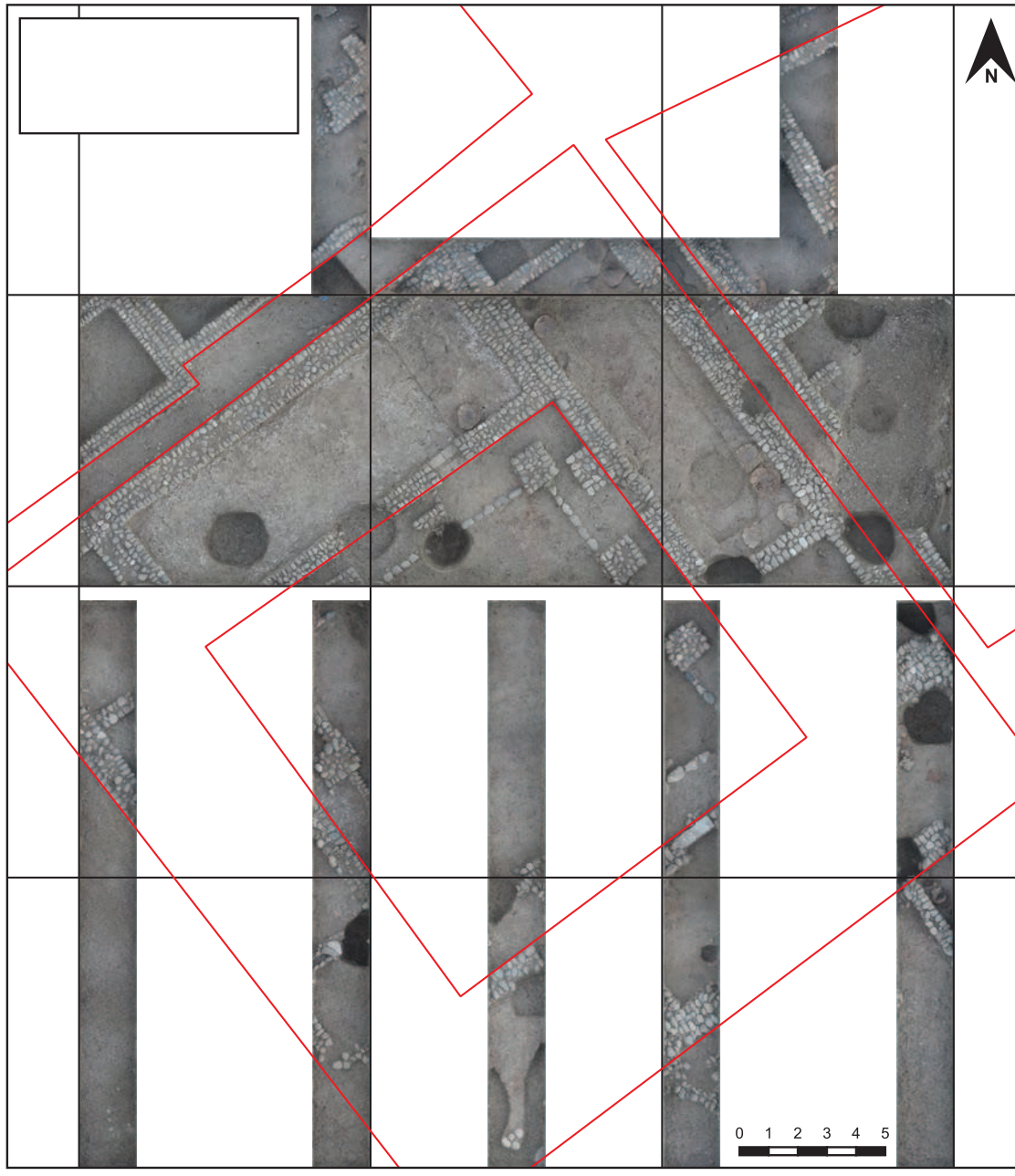

Fig. 7: Orthophoto of the excavations in DLT2 2017 and 2021. Prepared by Jens Rohde.

Excavations of the Assyrian fort at Usu Aska in Iraqi Kurdistan

John MacGinnis, Kamal Rasheed Raheem, Barzan Baiz Ismael, Amanda Dusting, David Kertai, Tina Greenfield, Guy Hazell, Timothy Matney and Awaz Jehad Heda

The excavations at Usu Aska form one part of the research strategy of the Darband-i Rania Archaeological Project, a field programme initiated by the British Museum in order to provide one of the two platforms for the field training of the Iraq Emergency Heritage Management Training Scheme. The Iraq Scheme is funded by the government of the United Kingdom and delivered by the British Museum under the direction of Jonathan Tubb, Keeper of the Middle East Department[1]. The Darband-i Rania is a pass now at the northeastern corner of Lake Dokan in Iraqi Kurdistan. The permit granted by the General Directorate of Antiquities of Kurdistan allows for the investigation of the sites of Qalatga Darband, Usu Aska and Murad Rasu *(Fig. 1)*, all three of which have suffered significant degradation from multiple factors. In previous communications we have reported on the 2016 and 2017 seasons of fieldwork in the Darband-i Rania, concentrating on the work at Qalatga Darband[2]. In this submission we focus on the results from Usu Aska.

[1] The other site chosen for delivering the field training is Tello in southern Iraq.
[2] MacGinnis 2020; MacGinnis et al. 2020.

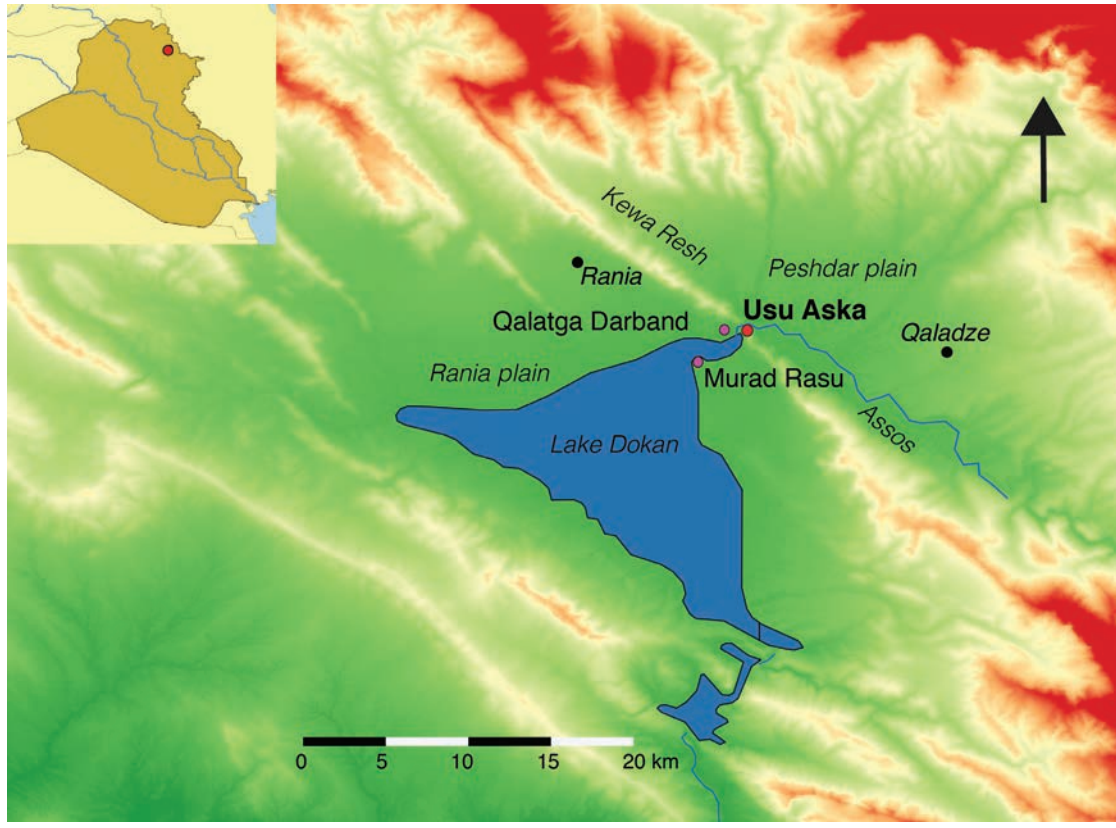

Fig.1 Map showing the location of the sites of the Darband-i Rania Archaeological Project.

In order to understand the setting and background of Usu Aska it is helpful to give some background on the Assyrians in the region. The history of the Assyrian presence in Kurdistan was first studied in a ground-breaking work by E. A. Speiser published in 1927[3]. Speiser carried out soundings at the massive site of Yasin Tepe[4], south of Sulaimaniya, provisionally believed (both then and now) to be the site of the Assyrian centre of Dur-Aššur, but little more happened in terms of exploring the Assyrian imprint in the region for the better part of half a century. In 1960–61 and then again in 1970–71 the Department of Antiquities carried out campaigns of excavations at Bakr Awa[5], at the southeastern end of the Shahrizor, and at Yasin Tepe in 1973[6]. However, while both these sites undoubtedly contain very important Assyrian levels, they were not significantly reached in these investigations (a situation now redressed in the case of Yasin Tepe, see below). But apart from these undertakings, the exploration of the Assyrian presence did not form a major focus of research in this part of Kurdistan. In recent years this has changed. The Kurdish Region of Iraq has seen a flowering of archaeological research, including work at numerous sites with Assyrian remains. In the eastern part of the region this has included investigations at Satu Qala in the Koya plain undertaken by a joint team of Leiden University and Salahaddin University of Erbil[7]; at Gird-i Sitak on the outskirts

[3] Speiser 1926–1927.
[4] Speiser 1926–1927: 11.
[5] al-Husaini 1962; Madhloum 1965; cf. Miglus et al. 2013: 43.
[6] cf. Iraq 37: 66-67.
[7] van Soldt 2013; Pappi 2012, 2018.

of Sulaimaniya, undertaken by the Directorate of Antiquities of Sulaimaniya[8]; at Gird-i Gulak, 2 km south of Rania, directed by Dr. Tim Skuldbøl and Dr. Carlo Colantoni of the University of Copenhagen[9]; at Gird-i Tle, in the northwest of the Rania plain, directed by Prof. Tamás Dezső and Dr. Gábor Kalla of the Eötvös Loránd University in Budapest[10]; at the sites of Qalat-i Dinka and Gird-i Bazar in the Peshdar Plain, directed by Prof. Karen Radner of the University of Munich and Prof. Janoscha Kreppner of Münster University and the Freie Universität Berlin[11]; at Yasin Tepe, directed by Prof . Shin'ichi Nishiyama of Chubu University[12]; and at Gird-i Rustam in the Penjween, directed by Prof. Dan Potts of the Institute for the Study of the Ancient World, New York, and Prof. Karen Radner of the University of Munich[13].

This growth in activity has been accompanied by a small but steady stream of discoveries of cuneiform texts, whether from excavation or chance finds. The first of these is the discovery of inscribed decorated bricks at Satu Qala which have pointed to a previously unknown indigenous kingdom which flourished in the interregnum between the Middle Assyrian and Neo-Assyrian control of this region[14]; both a fragment of a cuneiform tablet[15] and a fragment of an inscribed baked brick[16] from Qalat-i Dinka; a fragment of a cuneiform tablet from Gird-i Sitak[17]; an inscribed sherd from Gird-i Rustam[18]; and a fragment of a Neo-Assyrian tablet from Gird-i Gulak[19]. Somewhat surprisingly, no Assyrian rock reliefs have yet been found in this part of Kurdistan. This is in contrast to the north of the region, with the many reliefs connected with the water engineering projects of the Sargonid kings and the relief of Tiglath-pileser III discovered in 1973[20], and Iran, where three Assyrian rock reliefs are now known[21].

Turning now to the location of our present research, the Darband-i Rania - also known as the Darband-i Ramkan - is a pass located approximately 8 km east of Rania at the point where a gap between the Kewa Rash mountains to the northwest and the Assos mountains to the southeast allows the Lower Zab to flow from the Peshdar into the Rania Plain. This location now corresponds to the northeast corner of Lake Dokan. A rock relief depicting a conquering king striding up a mountain is still just visible on a stone outcrop in the western side of the pass. This relief has been attributed to the early second millennium[22]. The site of Usu Aska *(Fig. 2)* is located inside the pass on its southern side, at the base of Mount Assos[23].

[8] Saber – Hamza – Al-Taweel 2014.
[9] Skuldbøl – Colantoni 2016a, 2016b, 2020; Colantoni – Makinson – Skuldbøl 2018; for an overview of archaeological work in the Rania plain, both at the time of the construction of the Dokan Dam and more recently, see Eidem 2020.
[10] Dezső et al. 2017.
[11] Radner – Kreppner – Squitieri 2016, 2017, 2018, 2019.
[12] Nishiyama 2020, and cf. Nishiyama and Yamada in press.
[13] Potts et al. 2019.
[14] van Soldt et al. 2013; Pappi 2012, 2018.
[15] Radner 2015; Radner – Kreppner – Squitieri 2016: 17-22.
[16] Radner – Kreppner – Squitieri 2019: 137-139.
[17] Radner 2017.
[18] Potts et al. 2019: 109 Fig.21.
[19] MacGinnis – Skuldbøl – Colantoni in press is now MacGinnis – Skuldbøl – Colantoni 2020
[20] Postgate 1973; for the latest on the rock relief at Mila Mergi, see Edmonds 2019.
[21] For the Tang-i Var and Shikaft-i Gulgul reliefs see Grayson – Levine 1975; Reade 1977; Frame 1999, 2013; for the relief discovered at Mishkhas in 2009 see Alibaigi – Shanbehzadeh – Alibaigi 2012; cf. now also Radner et al. 2020.
[22] Miglus 2016.
[23] lat. 36.2151 N, long. 44.9933 E.

Fig. 2 View through the Darband-i Rania from the northeast: the site of Usu Aska, here partially flooded, is on the left (south) side of the pass, comprising the island and the fortifications closer to the bridge.

The remains, which were well known to local archaeologists, were recorded by the Sulaimaniya Governorate Archaeological Survey (SGAS) in 2013. The site comprises three distinct elements *(Fig. 3)*: (i) a promontory at the northern end of the site, which is sometimes an island due to the rising waters of Lake Dokan; (ii) a rectangular enclosed area at the western end; and (iii) a massive fortification wall connecting the two.

Fig. 3 Usu Aska viewed from the northern side of the pass - the site was originally understood to only comprise the island on the left, in due course it became clear that the massive stretch of fallen stones in the bottom centre concealed the remains of a massive fortification wall.

The complete length of the site is approximately 320 m. Actually, the initial understanding was that the site consisted only of the remains on the island, and indeed a brief assessment conducted at

Usu Aska in 2013 by Jessica Giraud and the SGAS recognised the site as consisting of only this area. The morphology of the western end part of the site is however clarified by a Corona satellite image from January 1960 *(Fig. 4)* which shows a rectangle feature measuring approximately 130 x 60 m.

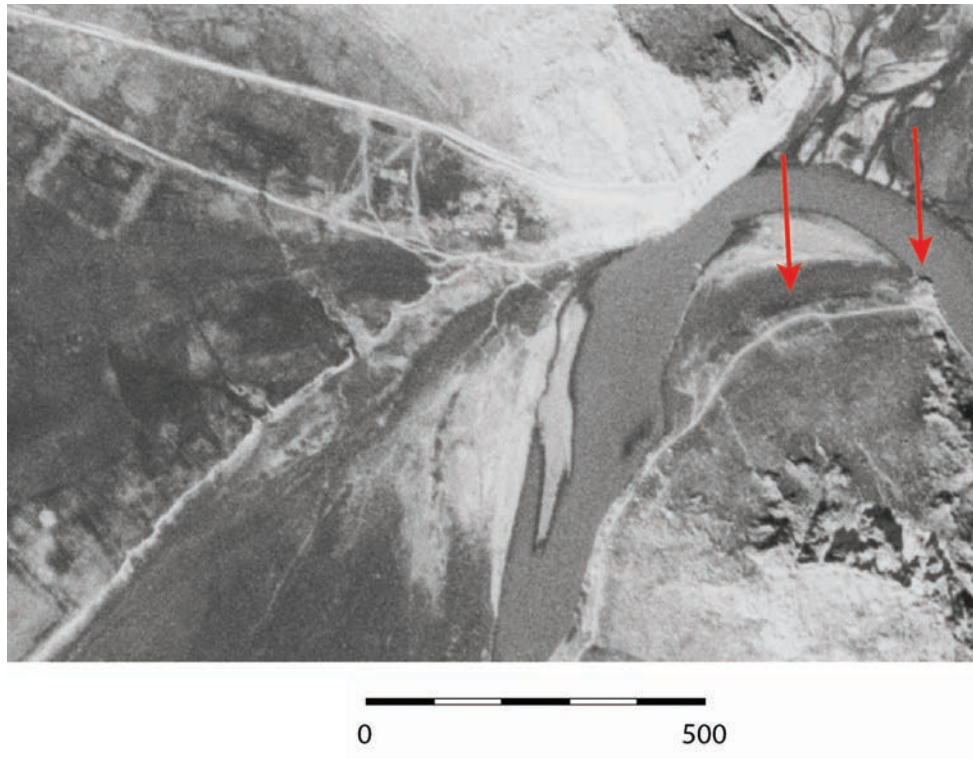

Fig. 4 Corona satellite image from January 1960 with arrows showing (i) a rectangular feature (the location of excavation Areas B-D) connected by a line of fortification walls to (ii) the knoll at the eastern end of the site (excavated as Area A); the square fort of the Parthian site of Qalatga Darband is also visible in the left hand of the image.

This appears as a discrete unit, and it may be that this represents the original installation, later expanded to include the whole southern side of the pass. The total area of the site is approximately 5 ha. While the information given by the SGAS did, as we know now, therefore give a misleading impression as to the extent of the site, it nevertheless indicated that there was an Assyrian fort at this location and it was this information which led us to the site: in this respect, it can be said the survey served its purpose very well!

In terms of the Assyrian involvement, there is increasing evidence that the occupation of the Rania plain started in the Middle Assyrian period. This is clear both from survey and textual data, the latter including multiple exemplars of an inscription of Tiglath-pileser I (1114-1076 BC) deriving from Bazmusian, the dominant site of the Rania plain, and recording building works at a city called Pakute[24]. It is probable that the Rania plain was the easternmost territory of the Middle Assyrian empire - the border may very well have been formed by the high ridges of the Kewa Resh and the

[24] Pedersen 2011; Frame 2011: 127-34, No.68; Eidem 2018. For a summary of the archaeological evidence for Middle Assyrian occupations on the Lower Zab see Tenu 2009: 172. For a more detailed review of the history and historical geography of the Rania plain in the Assyrian periods, see MacGinnis – Skuldbøl – Colantoni 2020.

Assos mountains, with a control point at the Darband-i Rania itself. Taking the various sources into account, an outline historical sequence can be reconstructed for this phase beginning with the occupation of the Rania plain and the founding of a regional capital by an earlier Middle Assyrian king (possibly Shalmaneser I), Pakute being attacked and possibly taken by anti-Assyrian forces (no later than early in the reign of Tiglath-pileser I), subsequently retaken and rebuilt by Tiglath-pileser I, and finally lost again to Assyria, possibly in that very same reign. After an interlude of some 150 years, Assyrian control in the Rania plain was re-established by Ashurnasirpal II (883-859 BC) at the beginning of his first campaign. At some stage this control was in all likelihood extended into the Peshdar plain, and, as far as we know, these regions then remained stable until the final years of the empire.

Field work commenced at Usu Aska in 2016 and up until 2019 operations were carried out over five seasons – Autumn 2016, Spring 2017, Autumn 2017, Autumn 2018 and Autumn 2019. To date excavations have been carried out in five locations *(Fig. 5)*, one (Area A) on the island/promontory at the eastern end of the site, and four (Areas B-E) on the fortifications and internal areas in the western half of the site.

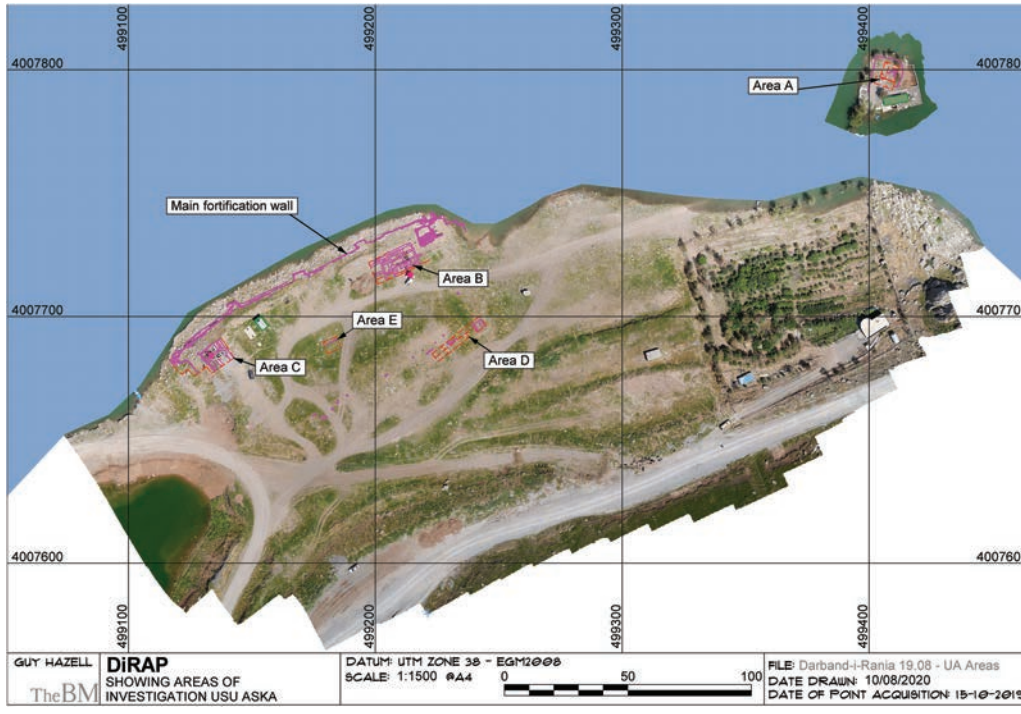

Fig. 5 Excavation areas at Usu Aska.

Throughout this time we have been very generously facilitated by the General Director of Antiquities of Kurdistan, first of all Abubaker Othman Zendin (Mala Awat) and then his successor Kaify Mustafa Ali, by Kamal Rasheed Raheem, Head of the Directorate of Antiquities of Sulaimaniya, and by Barzan Baiz Ismail, Head of the Directorate of Antiquities of Raparin. The team over these seasons has included Barzan Baiz Ismael, Sami Jamil Hamarashid, Halkawt Omer, Awaz Jihad Heda, Adil Hamamin Sharif, Ahmed Smail Hamad Amin, Dhuha Dhiaa, Dilshad Abdulmutalib Mustafa, Diman Klury, Hayder Mohammed Ali, Awder Nasralddin Hamasalim, Aymen Jasim Mohammed, Ihsan Lafta Enad Al-Ghanimi, Nadia Fadhel, Nawzad Abdullatif Abdulkarim, Bahzad Mohammed, Fereidoun Fayaq, Necmi Yaşar, Ramazan Qadir Ismael, Mustafa Ahmad, Stefano

Bertoldi, Gemma Barlow, Megan Bristow, Ricardo Cabral, Jan Čibera, Claudia Da Lanca, Amanda Dusting, Alberto Giannese, Tina Greenfield, Guy Hazell, Achilles Iasonos, David Kertai, Ewout Koek, Ben Leigh, Tom Lyons, Timothy Matney, Suzy Minett, Kate Morton, Lucas Proctor, Morgan Revels, Saleh Salimi, Alice Salvador, Ruth Stone, Mathilde Touillon-Ricci, Craig Williams, Zaid Saadallah and Zozik Sabah Noori. We would like to record our profound gratitude to all these individuals for their hard work, help and support.

Area A

A photograph taken by the local historian Abdulraqib Yusuf in 2011 *(Fig. 6)* shows the northern part of Usu Aska as a striking promontory formed by a substantial hillock with very steep sides on the side facing the Peshdar plain, over which it clearly had a commanding view.

Fig. 6 The promontory (island) at the eastern end of Usu Aska in a photograph taken by Abdulraqib Yusuf in 2011.

The remains of a defensive walling made of large stones can be seen crowning the top. At that time a small shelter of breeze blocks had been built on the top on the southern side, a driveway had been graded up the slope and a number of trees had been planted. Had the modern intervention stopped at this point the damage to the site would not have been too extensive. Unfortunately, worse was to follow. By the time we started work in 2016 the breeze block structure had been expanded, the whole area had been fenced off, the top of the site levelled and the sides bulldozed in preparation for both the laying of concrete terracing and constructing a garden. While we were unable to prevent further destruction in the subsequent three years, most notably the encasing of the outer sides of the knoll in a breeze block revetment *(Fig. 7)*, we were, fortunately, given permission to work on the site. It was clear that the opportunity to do so had to be seized.

Fig. 7 Area A as it appeared in October 2019, the surface and sides completely remodelled.

The first operation at Usu Aska was accordingly carried out on the island, commenced in Season 1 and resumed (briefly) in Season 3. At the beginning of the first season this part of the site was still largely under water, the unsubmerged portion forming just a small island.

Fig. 8 The Area A knoll, joined to the mainland by a small isthmus, in October 2016.

Indeed, it was reported that earlier in the year the site had been completely inundated, with the water reaching c. 2 m above the top surface. As the season progressed and the level of the lake fell, the area of the island increased, and by early October the island was connected to the mainland by a small isthmus *(Fig. 8)*. The area occupied by the garden measured approximately 8 x 8 m, with the breeze block structure with its a concrete floor and a metal superstructure measuring approximately 5 x 2 m. The garden was without vegetation, except for its edges, where trees had been planted. Only the tallest of these trees survived the flooding. The garden was at that time surrounded by a small concrete perimeter wall standing about 20 cm high on a foundation of concrete blocks.

More substantial landscaping had taken place around the lower parts of the site, particularly on the north, where an elaborate terrace had been constructed.

The excavation in Season 1 started as a 5 x 2 m trench (T1), expanded in stages to end up with an area of investigation measuring 6.5 x 6.5 m. In Season 3 this area was extended, with a 8 x 3 m trench along the southern side (T2) and a 5.5 x 3 m trench on the western side (T3) of the initial trench; these trenches were separated from the original trench by 25 cm wide baulks. The same sequence of phases was encountered in both seasons, though the work of Season 3 had to be abandoned prematurely due to complications following the Kurdish referendum of September 25th 2017. This sequence comprised the modern garden (Phase 1), an Ottoman layer (Phase 2), a layer of accumulated deposits (Phase 3), and the fill (Phase 4) and architecture (Phase 5) of a level dating to the Neo-Assyrian period.

Phase 1 (Modern)

The upper levels of the site were associated with the construction of the garden in the early twenty-first century. The topsoil layer, in addition to yielding a fragment of a glass bangle (UA-148) and an iron hook (UA-167), produced a sphendonoid (ellipsoid) hematite weight (UA-107, *Fig. 9*). This is presumed to be of Assyrian date, but the weight (30 g) does not obviously correspond to an Assyrian unit[25].

Fig. 9 Hematite weight UA-107.

Phase 2 (Ottoman)

Phase 2, which dated to the Ottoman period, consisted of the fragmentary remains of walls constructed with a single course of medium and smaller stones as a base. Phase 2 was better preserved architecturally in T2, less so in T3. All walls are poorly preserved with large gaps in between the stones. On top of this stone base a mudbrick or *pisé* superstructure is likely to have existed, the

[25] The standard Assyro-Babylonian system was based on a shekel of 0.8333 g, giving (in Assyria) a light mina of (approximately) 500 kg and a heavy mina of twice that weight (Powell 1990: 516; Reade 2018: 157). A weight of 30 g does not meaningfully fit into this schema. What would fit is the Phoenician system based on a shekel of 7.5 g (Birney – Levine 2011: 477; cf. Levine 2008: 381): a 30 g weight would correspond to 4 shekels, which is an attested quantity in the Levant (Birney – Levine 2011: 482). But whether our weight from Usu Aska belonged to a series based on the Phoenician 7.5 g shekel, or was rather based on a regional variant of the light mina, is impossible to say.

trenches contained too few stones to assume that additional stone courses existed originally. The gaps might represent stone robbing, even if no proof for this was found. In addition to ceramics, so far only studied preliminarily, finds in these contexts included fragments of pipes (UA-050, UA-101, UA-104, UA-106, UA-109, UA-113, UA-114, UA-116, UA-131, UA-145, UA-149-152, UA-155-158, UA-160, UA-162, UA-166, UA-168) and glass bangles (UA-110, UA-115, UA-117), iron blades (UA-134, UA-164), an iron fishing hook (UA-105), iron nails (UA-108, UA-120, UA-133), iron rings (UA-153, UA-172), copper alloy rings (UA-165, UA-170) and two terracotta disks (UA-129, UA-177). It is difficult to interpret the layout of this structure, though two tannurs point to a domestic element in what we presume to be the remains of an Ottoman period guard post.

Phase 3 (Interphase)

Phase 3 is an interphase zone of deposits accumulated between the abandonment of the Iron Age occupation and the construction of the Ottoman period building.

Phases 4-5 (Assyrian)

The oldest level excavated (Phase 5) was the most substantial *(Fig. 10)*. The area uncovered in the first season presents a very dense concentration of masonry, consisting of at least nine walls, three doorways and three floors or surfaces; the areas excavated in Season 3 appear less dense, although the elucidation of these parts was severely curtailed. All the preserved remains of Phase 5 walls are constructed with stones, laid without mortar, and are only preserved up to two or three courses high. These probably represent the stone bases on which mudbrick or *pisé* superstructures would have stood. These superstructures have not survived. Although the trench is filled with stones, most are integrated into the walls - the amount of stone rubble is insufficient to reconstruct walls made entirely out of stones. While the precise stratigraphic relations between the walls remain uncertain, most seem to have coexisted. Two additional sub-phases represent the few associated structures that are either somewhat younger or older, though still closely connected with the main phase.

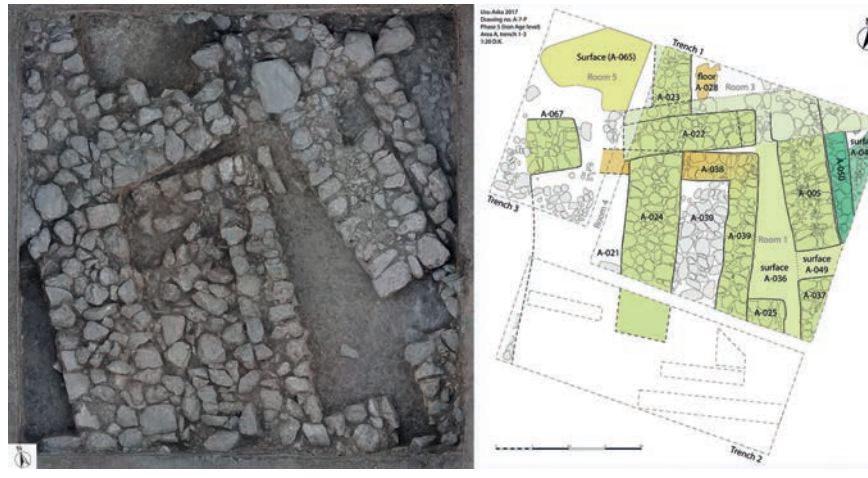

Fig. 10 The Iron Age levels (Phase 5) in Area A: (a) photograph of the trench at the end of Season 1, and (b) combined plan of the remains excavated in Seasons 1 and 3.

Five rooms and/or open spaces can be recognised within Phase 5. The only room completely defined is Room 1, an irregular wedged-shaped space accessed by three doorways. The surface of the room is characterised by a loose scattering of small pebbles with small concentrated patches, especially on the edge of doorway 2. The surface was devoid of finds other than a small number of sherds. In fact, no small finds were recovered from any of the Phase 5 surfaces; finds in the fills above the floors include a spindle whorl (UA-102), a pivot stone fragment (UA-121), a baked brick fragment (UA-128) and an iron ring (UA-125). The doorways into the room are all very narrow, presumably a reflection of the defensive purpose of the building. The remaining rooms were all only exposed to a fractional degree; it is, however, interesting to note that the lime plaster surface exposed in Room 3 was below the level of the surrounding walls and therefore belongs to an earlier phase.

In Room 5 the strikingly tapered form of wall A-067 suggests that it may be a buttress, which if correct would suggest the existence of a larger (outer) wall running north-south on its western side - it is possible that a fragment of wall at the western end of Trench 2 represents part of such a wall. The area in the centre of the trench is enigmatic. The dense packing of large stones which fills it is too orderly to just be fallen masonry; more likely is that this is a deliberate packing. Together with the walls surrounding it, it is plausible that this was the base of a tower; whether the space had functioned as a room at some earlier stage could not be investigated. From the surface (A-059) in T3 came three iron nails (UA-159, UA-161, UA-163).

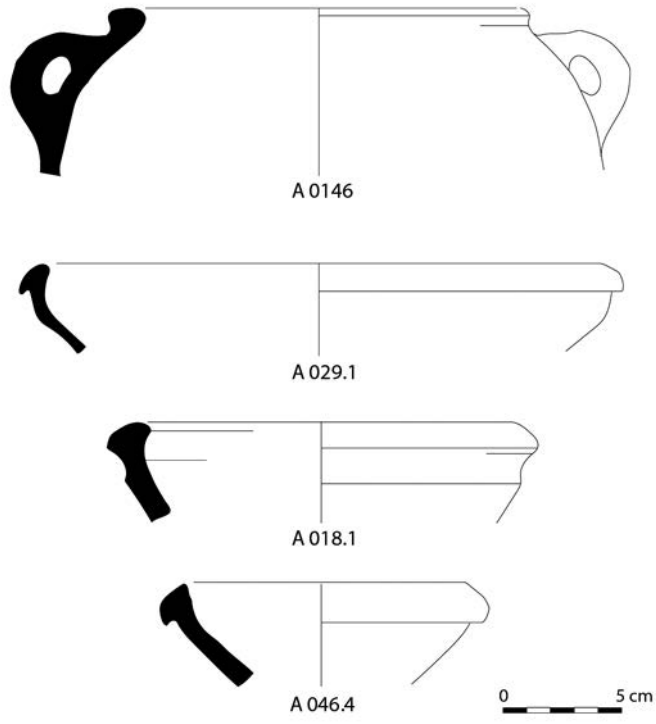

Fig. 11. Assyrian ceramics from Season 1 in Area A.

On the basis of the associated pottery *(Fig. 11)*, Phase 5 can be dated to the Iron Age, specifically to the Neo-Assyrian period. The remains preserved are complex and a complete interpretation is not yet possible. In order to properly understand these remains, a larger area needs to be opened

up and, where possible, taken down to a greater depth; it would indeed be good to establish the archaeological depth of the site, which remains unknown. This was in fact the aim of the Season 3 campaign, unfortunately abandoned following the Kurdish referendum. Since that time, however, building work on the site has continued and the opportunity for archaeological investigation has, regrettably, become more limited.

Area B

When we arrived back at the site at the beginning of Season 2, our only spring season to date, we found that the high level of the lake meant that it was not possible to work in Area A again at that time *(Fig. 12)*. Initially disappointed, we were forced to turn our attention to the remains to the west, along the side of the pass leading towards the bridge. In fact, this was a positive development. As we were to discover, the huge mass of tumbled stones which dominates the edge of the slope overlooking the water along this stretch is not rockfall but the remains of a massive fortification wall. Area B is located towards the northeastern end of this mass. The excavations here, carried out in the course of Seasons 2, 4 and 5, extended in the end over an area of 10 x 20 m and revealed evidence from three principal periods: Ottoman, Parthian and Assyrian. It should be noted that during the spring of 2019, when the levels of Lake Dokan reached maximum capacity, much of Usu Aska was under water. This included the excavation trenches in Areas B and C. Fortunately, these areas had been well backfilled at the end of Season 4 and the amount of damage from this inundation was limited.

Fig. 12 General view of Area B, with Area A as an island in the background.

Ottoman

During the removal of topsoil a rectangular room measuring approximately 5 x 4 m, with an internal dividing wall, was identified in the north part of the trench. The walls stood about 1 m high and the room was paved with coarse pebble and cobble surfaces which appeared to have been renewed over time. The small finds recovered, four stone fishing weights (UA-405, UA-407, UA-408, UA-409), two small iron blades (UA-403, UA-404), an iron nail (UA-415), a copper alloy needle (UA-417), a fragment of a glass bangle (UA-431) and a light orange terracotta cylindrical bead (UA-414), give a small insight into activities taking place in this structure.

Parthian

The Ottoman structure was built into an accumulation of poorly defined contexts which did not offer much chronological or stratigraphic precision. The principal feature of these contexts is that they lie above the Assyrian levels and below the Ottoman structure. The only period for which there were indications of any significant presence was the Parthian period, evidenced both by occasional ceramics and by a grave. The sherds recovered are similar to material from Qalatga Darband[26] and should be dated to the Early Parthian period (1st century BC). Among these are a few green glazed sherds of greenish buff fabric with small black mineral inclusions, also some fragments of bowls of a sandy light brown fabric similar to the main common ware fabric at Qalatga Darband.

But the best evidence for a Parthian presence was given by the grave B-039. The grave, which was cut into underlying Assyrian remains, has a well-built stone lining, preserved up to 25 cm high, into which had been placed a terracotta coffin (B-051): the sides of the coffin, which was undecorated, were well preserved, though the lid was collapsed and fragmented. A storage jar (UA-246) lying above this was evidently part of the grave, though whether part of the construction or as an associated good was not clear. Removal of the collapsed lid of the coffin revealed a badly preserved skeleton of an individual who had been laid on his side in a slightly flexed position with the head at the eastern end, facing west. The upper body-area (pelvis, spine, arms and skull) survived only in a very fragmentary state. The deceased measured approximately 0.75-0.85 m in length and was evidently a juvenile. The arms appear to have been slightly flexed, with the hands in the pelvis area, where a copper bronze ring (UA-237) was found. The skull was badly crushed, nevertheless it was clear that a coin (UA-233) had been placed in the head area, though exactly where could not be ascertained. The coin *(Fig. 13)* dates to the Parthian king Orodes II (57-38 BC). The obverse shows the king's head in profile, wearing a tasseled diadem; the reverse bears a Greek inscription saying: "Arsaces the King of Kings, beneficent, the just, the manifest, friend of the Greeks".

[26] MacGinnis et al. 2000.

Fig. 13 Coin of Orodes II (UA-233).

Assyrian

Removal of the interphase deposits led to the exposure of an architectural complex dated by ceramics to the Assyrian period. By the end of Season 5 two separate building levels had been excavated, an upper Building A, of which the remains in the trench were fully excavated and then partly removed, and a lower Building B which is still in the process of excavation. The architecture of both phases uses the same building techniques. The walls are built of irregular undressed stone, dry laid with no mortar. They are generally constructed by laying down a course of big stones, often placed so that their flatter sides are on the outside, with upper courses made of large medium stones, with the cavities filled by smaller stones. The walls are unplastered and range from 50 to 70 cm wide; the best preserved are around a metre high. Above these, the upper parts of the walls were very likely constructed out of mudbrick or *pisé*. The preserved fill contexts do often contain stone wall debris but this is not substantial enough to represent entire walls. In most cases the walls appear to have been intentionally dismantled, since new walls are generally built immediately above the lowest stone courses of earlier walls. It is interesting to note that deposits excavated close to the tops of these walls and slightly overlying them were consistently paler than much of the overlying deposits and may well represent degraded mud brick.

Surfaces and installations

Originally most surfaces seem to have been created just above the bottom of the stone walls, suggesting that the walls did not have proper foundations. The most common type of surface is made with pebbles, in some cases densely packed, in others a less deliberate covering of loose stones and rubbish. These stone surfaces are frequently accompanied by stone platforms created with larger stones. Only in Building B were floors found surfaced with white plaster. A few installations were found in these buildings. These include three tannurs (one in Room 23 of Building B and two in Room 3 of Building A) and two bins created by adding a single line of irregular stones to pre-existing walls (one in Building A Room 12 and one in Building B Room 22).

Room use

The evidence for room use is limited. The presence of a stone surface is not a sure indication that the space was unroofed. In Building A, for example, the corridor along the fortification wall can be assumed to have been unroofed, but it lacks a stone surface. Similarly, the very large Room 7 seems too big to have had a roof, but did not have a stone surface either.

Building A

The section of this building uncovered by the excavation comprised eighteen distinct spaces (Fig. 14) Although there is a strong degree of continuity in the architecture of Building A through its lifetime, there are, as one would expect, a series of modifications, and four phases can be recognised. The earliest phase of the building (Phase 4) is poorly understood and not easily separated from the subsequent Phase 3 (in several parts of the building there is in fact no detectable difference between Phase 3 and Phase 4). Phase 3 is the building in its original fully-developed stage. Phase 2 is the state of the building following a number of adaptations. The final Phase 1 refers only to some modifications in Room 5. While it is evident that Building A was built on top of the deliberately dismantled walls of Building B, it is important to note that Building A is not a simple rebuilding of the same plan, it is a different new building.

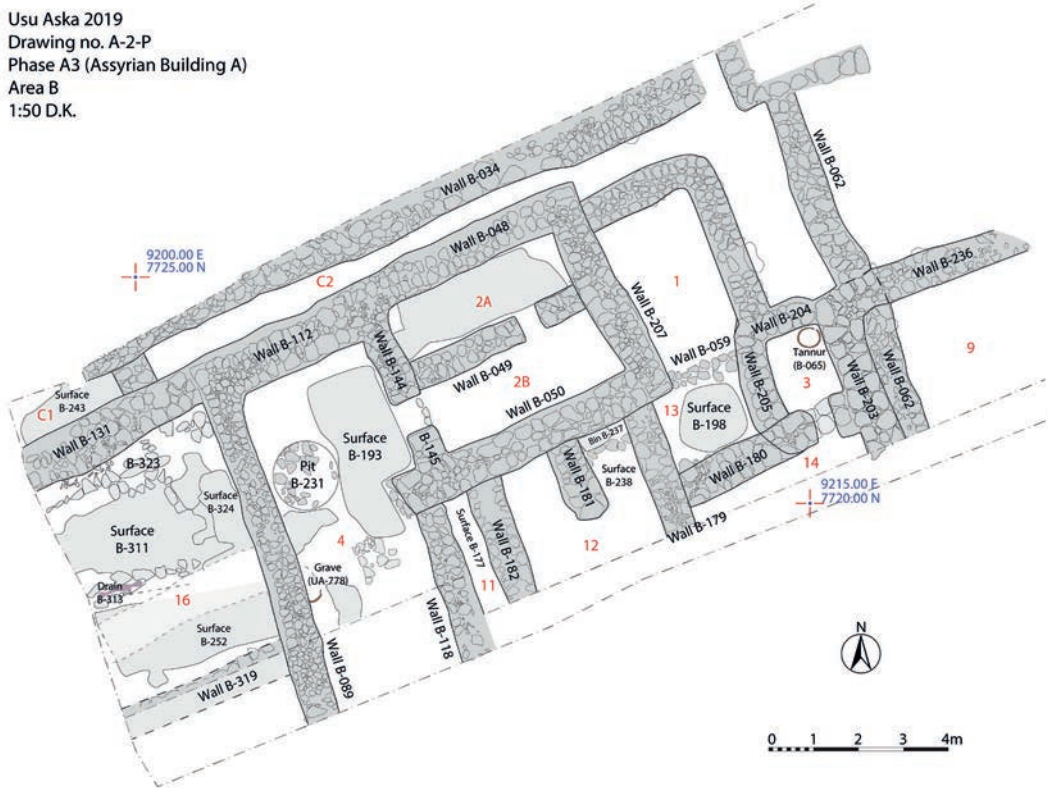

Fig. 14 Phase 3 of the upper level Building A in Area B.

The stratigraphy of Building A is not straightforward. Firstly, the building often reuses the preserved stone tops of Building B walls to create new surfaces within Building A. This means the lowest contexts of Building A are sometimes lower than the upper levels of Building B. As a consequence, it is often impossible to know to which building the lowest contexts within Building A belong. This problem is compounded by the lack of traced surfaces in some rooms during some phases. Secondly, most rooms are not stratigraphically linked. Although several rooms have surfaces on comparable elevations (used to separate them into phases), they cannot be proven to have been constructed simultaneously, especially since the surfaces might have been sloping downwards towards the east. Lastly, the stratigraphy is made more difficult by the apparent dismantling of walls within the complex. Some walls appear to have existed throughout the building's life but others that were added might still belong to the first phase of the building.

Room 1 (Phases 2 and 3)

Room 1 measured 3.5 x 2.3 m. The room had a *pithos* and finds on the floor (B-069) included an iron arrowhead (UA-206), an iron spearhead (UA-434) and a small piece of a cylindrical iron rod (UA-702), possibly part of a hinge.

Room 2 (17) **(**Phases 1-3)

Room 2 measured 4.5 x 1.7 m**.** The walls of this room, designated Room 17 in Phase 4 and then Room 2 after the insertion of a dividing wall in Phase 3, were built to a higher standard, with a noticeably smoother, consistent and more vertical finish. The room is noteworthy for the concentration of finds which it yielded, including an iron blade (UA-212), two iron nails (UA-204, UA-207), a piece of iron slag (UA-209), a copper alloy needle (UA-218) and a whet-stone (UA-208).

Room 3 (Phase 2-4)

This small room, which measured 1.7 x 1.4 m, would seem to have been built specifically to shelter a tannur (one was present in each phase). The suprafloor, in which a copper alloy needle (UA-243) and a broken baked clay trapezoid (UA-364, *Fig. 19*) were found, was characterised by a large amount of ash, burning and charcoal inclusions.

Room 4 (Phase 2-3)

Room 4 is an internal space measuring 6.2 x 3.3 m; finds include an iron spearhead (UA-428), an iron hook (UA-435), an iron nail (UA-427), a copper alloy needle (UA-437) and a fragment of a copper alloy fibula (UA-717). A burial B-245 (UA-778) was inserted below the floor against wall B-089, although due to the difficulty of identifying the cut it is not certain whether this was when the space was part of Room 4 or Room 15. The grave measured approximately 75 cm long by 40 cm wide. The southern edge of the grave - where the skull was located - had a thick lining of low-fired coarse clay with lime inclusions. The deceased lay on one side in a crouched position with the head oriented towards the northeast. The skeleton was in a poor condition: the skull, though

fragmented, was present, as were large parts of the spine and ribs, the upper part of the pelvis, the left tibia, the right lower arm and the left lower leg; most of the rest of the skeleton was missing. There were no associated grave goods.

Room 5 (Phases 1 and 2)

Rooms 5 and 6 were created by the addition of the east-west walls B-115 and B-116 in what had been Room 16. Room 5, which measured 4.3 x 3.5 m, is an interior space, containing some homogeneous and clean deposits consisting of fine material (B-158, B-140), above a likely surface or occupational horizon (B-157). Small finds recovered include two iron arrowheads (UA-419, UA-429), a bronze fibula (UA-459, *Fig. 15*), a bronze spatula (UA-421), two pieces of copper alloy rings (UA-432, UA-433), a copper alloy metal hoop (UA-420), two pieces of Egyptian blue (UA-716, UA-798), a pottery disc (UA-715) and an almost complete ceramic vessel (UA-430).

Fig. 15 Bronze fibula (UA-459).

Room 6 (Phases 1 and 2)

Room 6 measured 4.1 x 1.5 m. The surface deposits, which contained many broken pottery sherds, pieces of fired clay, broken tannur fragments and a substantial deposit of stone rubble, indicate that this was an outside area; four baked clay trapezoids (UA-422, UA-423, UA-425 UA-704) were found in this room *(Fig. 18)*.

Room 7 (Phase 2)

This room, which measured 9.3 x 2.8 m, is presumed to have been an outdoor space.

Room 8 (Phase 2)

Room 8 is a tiny long narrow space measuring 3.0 x 0.5 m, created by the insertion of wall B-049. The purpose of this space is unclear. If it did not have a mudbrick superstructure it could have been used for storage - perhaps for spears?

Room 9 (Phase 1-4)

This is the designation of a space at the eastern end of the trench which has not yet been fully explored. The area exposed to date measures 3.4 x 2.9 m. Finds from this area included a complete iron sickle blade (UA-742) and an iron nail (UA-782).

Room 10 (Phase 4)

This space, which measured 7.2 x 4.7 m, opens off the corridor; the pebble surface with large pottery fragments and animal bones suggests that it was an outside area.

Room 11 (Phase 3)

This restricted space measuring ca. 2.70 x 0.60 m is likely to have been used for storage.

Room 12 (Phases 3 and 4)

Room 12 was created by the insertion of a number of walls into the Room 7 of Phase 2; it measures 3.2 x 2.8 m. There is a bin built of medium-sized stones in the northeastern corner. As Room 7 was an outside space it can be suggested that this is also true of Room 12, but this is not certain. The surface in this room was very difficult to discern, though it did yield an arrowhead (UA-701).

Room 13 (Phase 3)

This is a space measuring 2.1 x 1.8 m between Rooms 1, 2, 3, 12 and 14. However numerous uncertainties concerning the surfaces and the delineating wall on the north (B-059) leave it presently unclear whether or not this was a separate space from Room 1. Fragments of a bronze pin (UA-713) were found here.

Room 14 (Phases 3 and 4)

Only a small (4.1 x 0.9 m) section of this space in the southeastern part of the excavation areas has been exposed so far, but the fact that Room 3 (with its tannurs) leads off from Room 14 suggests that the latter was probably an outside space; an iron nail (UA-748) was found here.

Room 15 (Phase 4)

This room, which measured 4.1 x 3.4 m, was probably separated from Room 18 by a western extension of wall B-050 in the original configuration of Building A, though this is not certain; no clear surface could be found which established whether this was an interior or exterior space.

Room 16 (Phase 3 and 4)

Room 16, which measured 5.2 x 4.3 m, was part of the original configuration of Building A. The area is characterised by a number of rough stone and pebble surfaces and a stone-lined drain running diagonally through the middle. The size of the space, the nature of the surfaces and the drain running through all indicate that Room 16 was an outside area. Finds here include an iron arrowhead (UA-762) and a grinding stone (UA-1100) which was reused in the surface.

Room 17 (Phase 4)

Room 17, which measured 4.4 x 3.6 m, was part of the original configuration of Building A. It was obviously an interior space, but there is an issue with the understanding of this room deriving from the fact that it is difficult to isolate the associated surfaces from the Building B surfaces directly below. After the insertion of a dividing wall in Phase 3 the room was re-designated Room 2.

Room 18 (Phase 4)

Room 18, which measured 3.1 x 3.3 m, was part of the original configuration of Building A, and probably formed a square room separated from Room 15 to the south by a continuation of wall B-050, of which only traces survive. However, to date no associated surfaces have been found and this reconstruction remains speculative.

Corridor 1

A corridor runs along almost the whole length of the northwest side of the trench, separating Building A from the fortification wall. At some point in Phase 3, a small blocking wall (B-149) was inserted towards the western end of the exposed length, dividing it into Corridor 1 to the west and Corridor 2 to the east. Corridor 1 is 1.1 m wide and was exposed for a length of 2.6 m; Corridor 2 is 0.7 m wide and was exposed for a length of 10.2 m. The surfaces (B-069, B-043, B-042, B-218) in these areas consisted of rough patches of small pebbles. A number of finds were made in the accumulated deposits, including an iron arrow-head (UA-241), an iron blade (UA-436), an iron nail (UA-205), a copper alloy clip or earing (UA-242), a copper alloy needle (UA-452), a curved baked clay implement about the size of a thumb which may be a burnisher (UA-453, *Fig. 16*) and three joining fragments of a beautiful dish made of polished green serpentine (UA-707, *Fig. 16*).

Fig. 16 (a) Baked clay implement (UA-453), possibly a burnisher;
(b) rejoined fragments of a dish made of polished green stone (UA-707).

Grave B-045

A burial (B-045) was found underneath the surface of the corridor. The burial was both eroded and disturbed, the skeleton was poorly preserved, and the cut was not observable at all. The deceased was laid in a crouching position with the head towards the north. Accompanying goods, somewhat scattered, included a fine Neo-Assyrian bowl (not fully intact, UA-224, *Fig. 17*) and a bronze ring (UA-222).

Fig. 17 Assyrian bowl UA-224 from grave B-045.

Building B

Following the completion of the uncovering of the parts of Building A falling within the excavation area, work proceeded to investigate the layers below. This was to a large degree undertaken by working in the spaces available in the excavated rooms of Building A; the Building A walls were only removed very selectively. These investigations led to the discovery of an entirely separate level of architecture, duly designated Building B *(Fig. 18)*, constructed in exactly the same method as the upper building: stone wall foundations with presumed mudbrick superstructure and variously pebbled, cobbled and plastered surfaces. While remains of Building B have been found in most parts of the trench (except for its western part below Room 16, where Building B levels were only reached at the end of season 5), it has so far only been partially excavated. Currently six rooms (19-24) have been designated. While the general orientation of Building B, aligned to the main fortification wall, is the same as Building A, the detailed configuration is otherwise different. An important observation is that, as far as we can tell at this stage, Building B is built up against the main fortification wall (in contrast to Building A which was separated from the wall by a corridor). While it is difficult to be certain due to the limited exposure, a preliminary interpretation of the layout of Building B is that Room 23 is a courtyard around which the other rooms are arranged. This is suggested not just by the architectural configuration but also by the presence of a tannur and a large amount of ash in Room 23, and also a depression in the stone pavement which may have been used for draining; the remains of large storage vessels would be consistent with both roofed and open spaces. Otherwise there is very little in the way of indication of room function. Room 22 had a cobbled stone rectangle (B-303) and a small bin/container made of smooth river stones (B-279), both with associated ashy deposits: these must relate to a domestic function, but again it is not possible to be more precise. Room 24, in the west of the trench, is interesting. The recovered plan looks like it is part of a large open space, though fragments of a white plaster surface (B-286) found in the northeastern corner of the room close to wall B-285 would indicate that that part at least was an interior space. However the Building B levels have only just been touched in this part of the trench and to elucidate this more excavation is needed. At the end of its use-life, Building B was deliberately dismantled to the height of its standing stone wall bases. The remaining spaces were filled largely with earth deposits, at least some of which were the remains of what had been mudbrick superstructure.

Three phases have been recognised in Building B to date: Phase B3 corresponds to the earliest manifestation, so far reached only in Room 20; Phase B2 is the main phase of the building; Phase B1 is a later phase so far found only in Rooms 19 and 20.

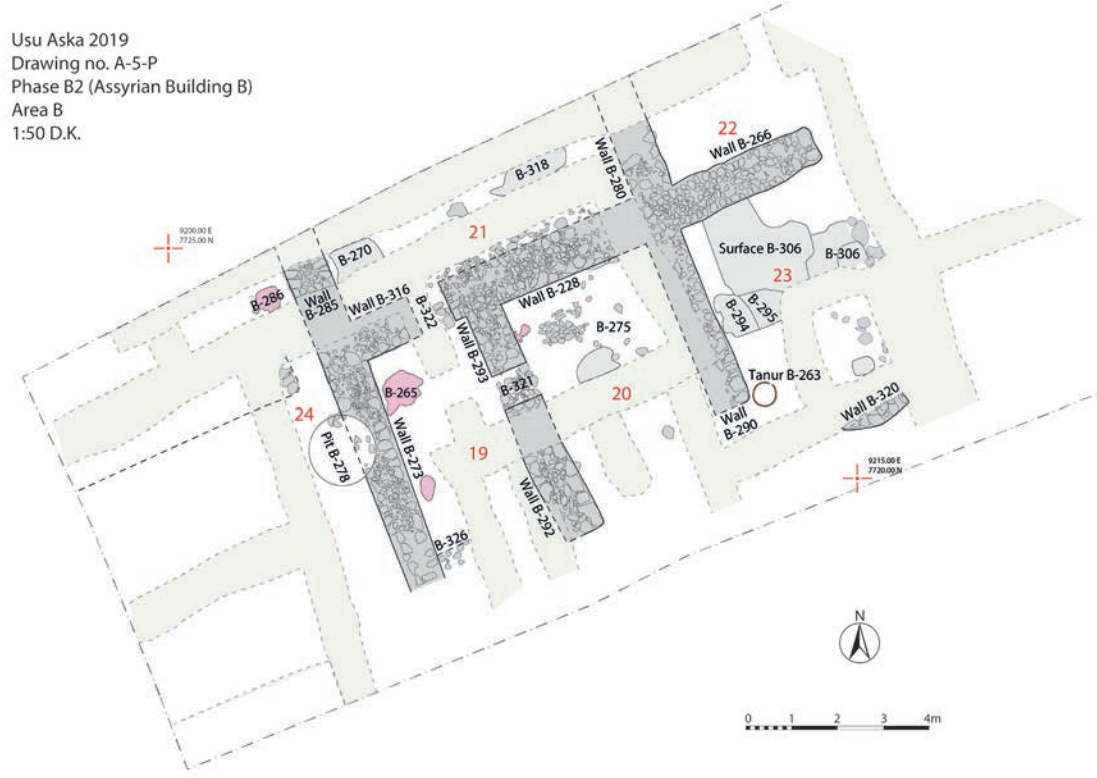

Fig. 18 Phase 2 of the lower level Building B in Area B.

Room 19

Room 19, which measured 5.4 x 2.4 m, is an internal room connecting to both Room 20 to the east and Room 21 to the north. The southern edge of the room is still uncertain. A white plaster surface (B-265) covers most of the room. A few fragments of iron (UA-765, UA-774, UA-1103) and of copper alloy (UA-739) were found in this area.

Room 20

Room 20, which measured 5.3 x 3.5+ m, is well articulated in its northern part but less well understood further south, perhaps due to a later dismantling of its walls. Currently no southern edge is known for this room. Both its western (B-292) and eastern (B-290) walls do not seem to continue south (the area south of B-290 is yet to be fully explored, partially due to the remains of the later wall B-180 still being *in situ*). The fact that the floor, which was surfaced with small stones, was finished with white plaster, at least on its western side, suggests that this was an internal room; the interpretation of an oval-shaped stone feature (B-258) level with the surface as a column base would be consistent with this. A copper alloy fibula (UA-735) and two iron nails (UA-748, UA-776) were found in this room.

Room 21

Room 21, which measured 6.8 x 1.6+ m, is located south of the exterior wall of the complex and currently only known to have been accessible from Room 19 through doorway B-322. The main part of this room is below the northernmost wall of Building A and has therefore not been explored. Fragments of an iron nail (UA-794) were found in this room.

Room 22

Room 22, which measured 3.7 x 1.6+ m, in the northeast part of the exposure, represents the oldest phase currently known in Building B. To date, only the western (B-280) and southern (B-266) walls are known. A door east of the latter wall gave access to Room 23. The room had a stone surface (B-303), roughly rectangular in shape, but it does not extend up to the surrounding walls. The context (B-260) covering this surface has a lot of ash and almost no pottery or animal bones. Ash concentrations were found mostly in the western part of the context surrounded by a hard orange brown soil which may be the remains of (fallen) brick. In the lower levels several greyish mortar lines were found, ca. 1 cm thick and up to ca. 40 cm long. Some were outlined by a dark grey ashy line. The context thus seems to represent a destruction level mostly formed by destroyed walls. This would explain the minimal amount of pottery in the context. A small bin/container made of medium sized river stones (B-279) against wall B-280 had a fill containing a high proportion of charcoal and ash together with a concentration of pottery fragments, including bowls, a globular vessel (UA-1105) and bottles, but no complete vessels. The bottom of the pottery was lower than the bottom of the surrounding wall of the bin (B-279). An iron nail (UA-756) was found in this room.

Room 23

Room 23, which measured 4 x 1.6+ m, located in the southeastern corner of the trench, may have been a courtyard. Currently only parts of the room's northern and western walls are known. The northern wall ends in a doorway connecting with Room 22 to the north. Room 23 had a surface of small stones with a lot of charcoal, into which a tannur was cut and on which were large fragments of a storage vessel. An iron arrowhead (UA-788) and a complete copper alloy needle (UA-799) were found in this room.

Room 24

Room 24 is the westernmost room currently known. It appears to be a large open area as no walls have yet been found to the west of wall B-273, though the fragments of a white plaster surface (B-286) found in the northeastern corner of the room close to wall B-285 would indicate that at least that part was an interior space. It is not unlikely, though, that the main part of the area is in fact an outdoor space, more excavation is needed to elucidate this. It is difficult to give dimensions at this stage; the area exposed so far measures 4.8 x 10 m, but it is possible both that the true dimensions are larger or, if there are bordering walls waiting to be exposed, smaller. Finds in this room include an iron arrowhead (UA-788), a piece of Egyptian blue (UA-783) and a cowrie shell (UA-784).

Summary of Area B

Building A was built above the levelled and cleared remains of Building B. Both buildings are aligned with the main fortification wall but are otherwise laid out differently. The method of construction was however the same. We have no absolute dates for either of these buildings other than that they are Neo-Assyrian. Numerous charcoal samples were taken and will be sent for radiocarbon analysis, but as they can be expected to fall within the Hallstatt plateau they are only likely to elucidate the chronology to a limited degree. Whether the archaeology continues below Building B is still to be determined.

The small finds recovered in Area B paint a broad picture of the activities which took place there. In **Building A**, the iron arrowheads and spearhead clearly relate to the military function. The iron nails, iron knife blades and the whetstone are general hardware. The copper alloy needles were presumably for mending clothes. It is difficult to know what was the function of the copper alloy spatula - perhaps for medicine? The iron sickle blade is an indication that the soldiers were involved in agriculture, while the tannurs and grinding stone point to food production. A pottery disc may have been used as either a token, perhaps for a game, or a jar stopper. The artefact tentatively identified as a clay burnisher hints at pottery production. The polished stone dish and the fragments of Egyptian blue both hint at personal luxury items[27]. The function of the baked clay trapezoids *(Fig. 19)* is not clear, but as the majority were found in contexts associated with ash and/or tannurs, perhaps they were andirons (fire-dogs)[28].

The inventory from **Building B**, though not (as yet) so rich, is not fundamentally dissimilar. The main classes of finds are once again iron arrowheads and nails, and copper alloy needles and fibulae. The cowrie shell and the fragments of Egyptian blue once again hint at personal luxury items.

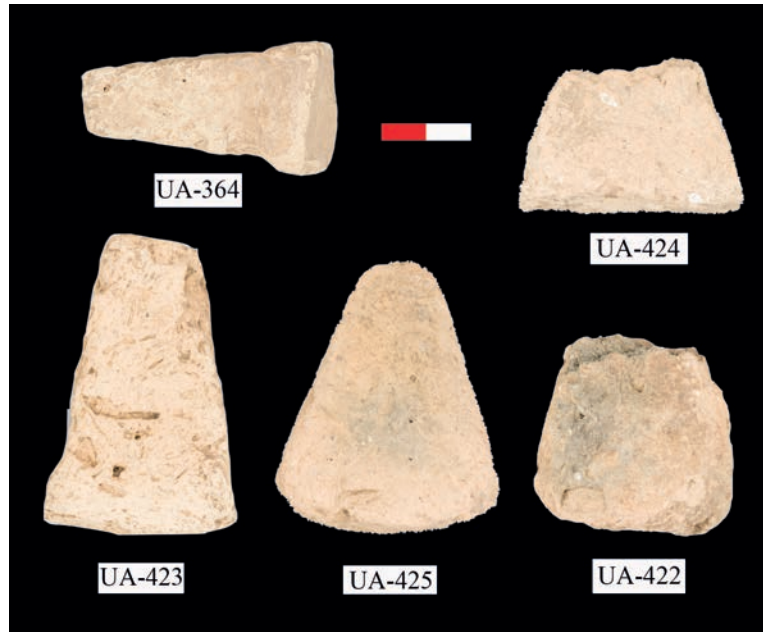

Fig. 19 Baked clay trapezoids from Assyrian levels in Usu Aska

[27] For a recent survey of Egyptian blue in the Iron Age see Zaina et al. 2019.
[28] In addition to the five trapezoids already mentioned (UA-364, UA-422, UA-423, UA-425, UA-704), a further one (UA-424) was found reused in a post-Assyrian surface

In the northern corner of Area B is a rectangular feature (B-004), clearly visible in an orthophoto from Season 2 *(Fig. 20)*, measuring 3 x 4 m made of very substantial stones (60+ cm in length), of which only the top surviving layer was exposed. This point marks the north corner of the (presumed original) rectangular fortress at Usu Aska and is interpreted as the base of a tower. The actual corner of the fortifications was marked by a round buttress, as uncovered in Area C (see below): this appears clearly in the orthophoto. B-004 is bound on the northeastern side by a wall (B-005) which continues on to form a protruding buttress in the main fortification wall (here designated B-034). Excavation on the outer face revealed a revetment of small and medium stones (B-022, *Fig. 21*) sloping up against B-005, 1-1.5 m wide at the base and up to 1 m high. This revetment rested on a pebble and earth surface (B-030) and was covered by erosional deposits of earth containing large numbers of stones of differing sizes sloping up against wall B-005.

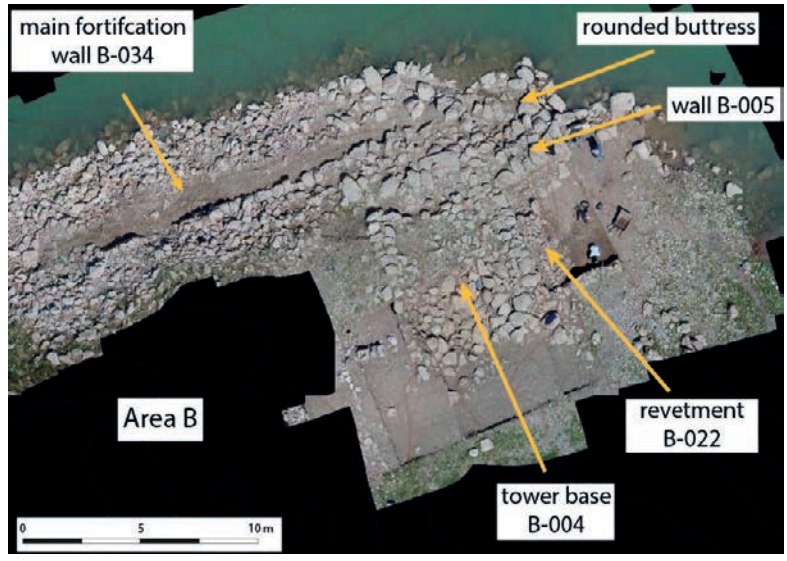

Fig. 20 Orthophoto of Area B taken in Season 2 showing the tower base and fortification wall.

Fig. 21 Revetment against the return of the fortification wall at the corner of Area B.

Area C

Area C is located at the southwestern corner of Usu Aska at the point where the fortification wall turns towards the slopes of Mount Assos. Investigations were carried out here in Seasons 2, 3, 4 and 5. The aim was to investigate both the main fortification system and associated internal architecture. The work comprised three separate (though related) operations: the main trench on the inside corner of the fort, excavation on the outside corner of the fortification wall, and cleaning along the exterior line of the wall.

Fig. 22 Work in progress in Area C.

Main Trench

Area C Trench 1 *(Fig. 22)* was positioned at this western end of the site where examination of the huge mound of large tumbled stones revealed that intact walling was concealed within. Above this walling the stone rubble formed a steep gradient up to a level area where other masonry visible on the surface suggested the wall made a right-angle return at this point. The aim was therefore to excavate the corner on the inside of this return. The upper trench was bounded by the interior faces of the fortress walls (to the southwest by wall C-023, to the northwest by wall C-006). The operation evolved into a trench measuring 10 x 9.5 m, with an extension off the southwestern side across wall C-023 which developed into an exploration of the corner tower, and a clearing operation along the main length of the wall following on from this.

Over the course of the four seasons of excavation the following cultural phases were identified in Area C:

Phase 1 Modern
The modern topsoil, car park levelling fills and flood deposited silt and rubbish

Phase 2 Later Parthian
A rectangular structure, a large circular kiln and two burials

Phase 3 Parthian
A substantial wall abutting the fortress wall and two burials

Phase 4 Hellenistic/Parthian
A series of small walls with occupational accumulations and a burial

Phase 5 Neo-Assyrian
Final Assyrian level (Rooms 1, 2, 4, 5 - upper occupational horizon)

Phase 6 Neo-Assyrian
Upper Assyrian level architecture (Rooms 1, 2, 4, 5 - lower occupational horizon)

Phase 7 Neo-Assyrian
Reconfigured Assyrian level (Rooms 1, 2, 8)

Phase 8 Neo-Assyrian
Lowest Assyrian level (Rooms 6, 7, 9, 10)

Phase 9 Neo-Assyrian
Mudbrick platform

Phase 10 Neo-Assyrian
Monumental fortification walls

The first four of these phases will only be dealt with very briefly. Finds recovered during the clearance of modern debris and fallen stones (Phase 1) included an iron nail (UA-327), three iron arrowheads (UA-0322, UA-328, UA-1003), two stone spheres 5-6 cm in diameter, probably projectiles (UA-343, UA-345), a stone quern (UA-520) and a ceramic disc with a piercing in the centre (UA-329) which may be a loom-weight. The salient aspects of Phase 2 were a lime kiln, a single room structure and some graves, all dating to the Parthian period. The major features in Phase 3, also Parthian, were a substantial wall running off at right angles from the main fortification wall and some more graves. Phase 4, which yielded ceramics of mixed Parthian, Hellenistic and Assyrian date, is a late use of the surviving architecture of the last Assyrian phase, including a tannur and a grave.

The Assyrian levels

Below these levels were well-preserved remains dated by their ceramics to the Neo-Assyrian period. These were characterised by walls built of stone foundations generally up to half a metre high. These originally supported mudbrick superstructures which, although they have now disappeared, have left ample traces in the form of collapse/levelling deposits consisting of orange-brown silty clay with calcite inclusions. The occupation was clearly protracted, with at least two major phases, each with significant sub-phases.

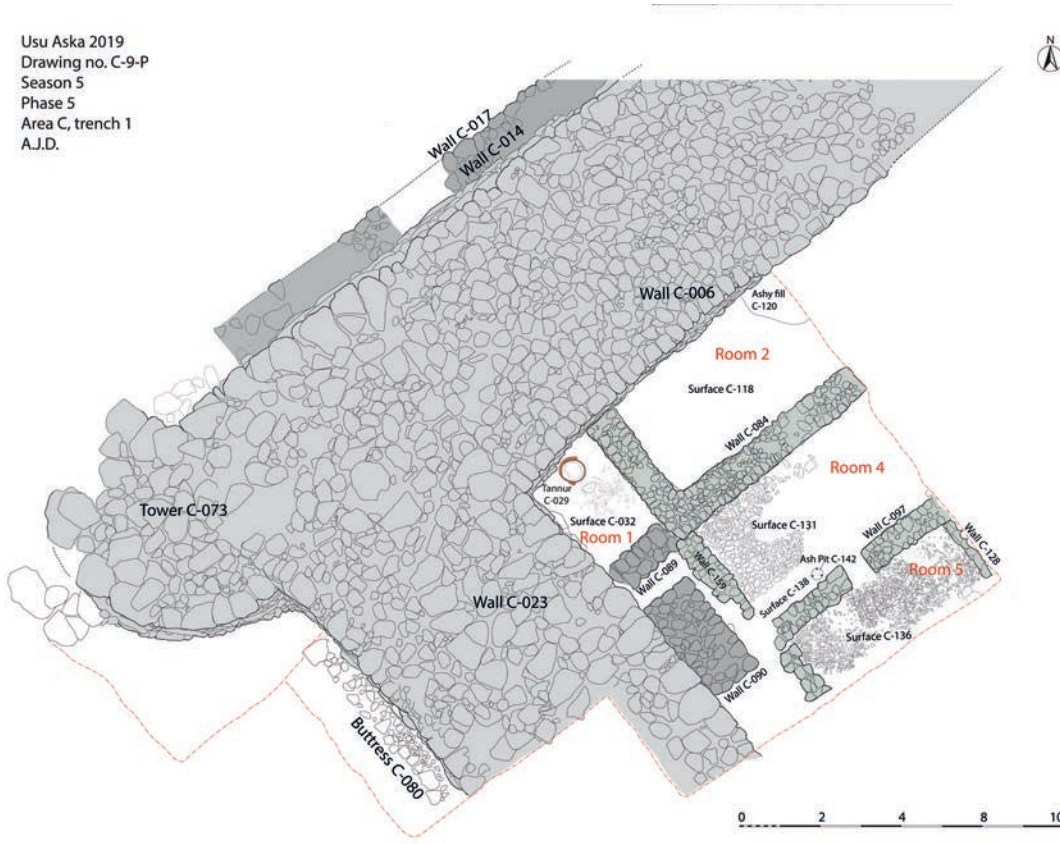

Fig. 23 Plan of Phase 5 in Area C.

Phase 5

The uppermost level Phase 5 *(Fig. 23)* comprised walls, associated surfaces, accumulated occupation deposits and a burial. Four rooms were defined by three walls aligned with and/or running out from the fortification walls – a southeast-northwest wall (C-026) between Room 1 and 2 and defining the southwest end of Room 4, abutting wall C-006 but not bonded with it; wall C-084 between Room 2 and Room 4; and wall C-097 between Rooms 4 and 5. Wall C-026 bonds with C-084. All three of these walls were made by the same technique, consisting of dry-stone built facings of medium-sized (15-30 cm) stones with a rubble core. Walls C-026 and C-097 were 70 cm wide and preserved up to 70-85 cm high; C-084 was more substantial, 90 cm wide and preserved to a height of 85 cm. The walls were utilised for multiple phases of occupation, with surfaces and room fills abutting them, and two of them showed evidence of adaptive reuse, with blocked doorways. Within Rooms 1, 2, 4 and 5 a surfacing level was identified that was contemporary across the rooms. Two notable finds in the upper fill sealing this phase were a poorly-made cylinder seal of white stone with a rough linear design (UA-315, *Fig. 24*) and a baked clay trapezoid (UA-364) of the same type found in Area B. Lower down, a mortar made of a piece of rounded limestone 4 cm long (UA-333 B) together with a pestle made of a second rounded stone with wear on one face (UA-333A) was found in the fill (C-049) of Room 1 in this phase.

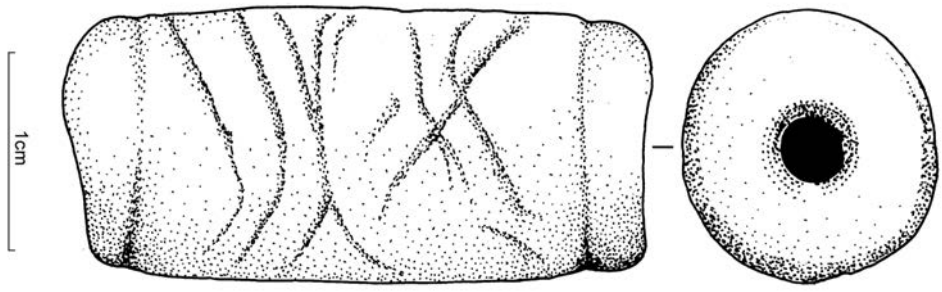

Fig. 24 Cylinder seal of white stone with a rough linear design (UA-315).

Room 1

Room 1, which measures 2.8 x 1.95 m, is located right in the western corner of the fortification wall. The room had a patchy cobbled surface (C-032) and a tannur (C-029) in the western corner. A stony rectangular area (C-032) to the east of the tannur may represent some form of platform or paving associated with wall C-026.

Room 2

Room 2, which measures 5.5 x 3 m, runs along the main fortification wall northeast of Room 1. The surface (C-118) of the room was an earthen floor of fine light brown clayey silt with occasional small and medium sized stones with a certain amount of ceramics lying pressed flat into the surface. There was a depression in the northern corner filled by grey-green ash (C-120). The fill above contained a spherical carnelian bead (UA-395) and an elliptical object of unbaked clay a little over 8 cm long (UA-511) which may have been a sling bullet.

Room 4

Room 4, which measures 5.25 x 3(+) m, is the central room in the exposure. The fill (C-107) yielded an iron nail (UA-526). Below this was a supra-floor deposit (C-130) with ceramics, including a vessel (UA-527), smashed on a surface of small to medium pebbles and cobbles (C-131) set in mud. A blocked-up doorway (C-149) was identified in the wall dividing Room 4 and Room 5 (C-097). The threshold of this doorway was on the same level as surfaces C-131 and C-138 in Room 4 and surface C-136 in Room 5. The doorway was therefore blocked, and the wall reused, after those surfaces went out of use.

Room 5

Room 5, in the southeast, could not be fully excavated, but an area measuring 5 x 2 m was exposed. It had a small wall (C-128) beneath the Parthian wall C-055 at the northeast end of the room. This wall was aligned northwest-southeast and formed the north corner of the room, abutting, rather

than bonded with, wall C-097. A supra-floor of compact dark grey brown silty clay (C-135) containing fragments of ceramics and animal bones overlay a cobbled surface (C-136).

Phase 6

This phase is a lower occupational horizon within the same architecture; Phases 5 and 6 were separated by a zone of levelled mudbrick.

Room 1

The chief feature in this room was a rectangular stone platform (C-148); a small piece of alabaster, possibly a rim fragment of a vessel (UA-598), was found in the surrounding accumulation deposits (C-168).

Room 2

The chief feature in this room was a poorly preserved burial (C-133, UA-531) in a semi-crouched position; there were no ceramics or other grave goods.

Room 4

This room had a partially burnt surface (C-172) with a bronze fibula (UA-1009) and a lead bell-shaped object (UA-1010) lying on it.

Room 5

Earthen floor with stone patches, with a large quantities of pottery in the northeast end of the room and a pot (UA-587) lying smashed in the middle.

Phase 7

Phase 7 is the earliest manifestation of the upper phase, at this stage consisting of walls C-026 and C-084 to delineate Rooms 1 and 2, but with the area to the south consisting of an open space (designated Room 8).

Room 1

Fill of orange brown silty clay (C-173), with a patch of ash in the middle of the room.

Room 2

A surface (C-146) made of packed small stones in a mid-brown clayey silt with a tannur (C-153) in the northern corner; a fragment of a terracotta artefact (UA-556), possibly part of a figurine, was found here.

Room 8

In the area of what had in Phases 5 and 6 been Rooms 4 and 5: after the southwest wall C-159 and the wall dividing the two rooms (C-097) had bottomed out and were removed, the area below these walls, the southeastern half of the trench on the southeast side of wall C-084, was designated Room 8. This space was exposed over an area of 5.5 m x 6.75 m. A fill of mid-brown grey silty clay with frequent angular stones (C-174) yielded an Egyptian blue bead with an engraved design, possibly a scorpion (UA-1012, *Fig. 25*) and two fragments of baked clay artefacts (UA-1013, UA-1015), both of which may be parts of figurines. An ash pit or fireplace (C-181) was cut into the northeast part of the room. In the southwestern part of Room 8 was a platform (C-090) measuring 4.5 x 1.5 m standing two courses (40 cm) high.

Fig. 25 Engraved Egyptian bead seal (UA-1012).

Phase 8

Following the excavation and recording of these phases, the operation progressed to examining the remains below. We proceeded cautiously, excavating in the available areas and only removing walls as necessary in order to expose the underlying remains. This resulted in the exposure of a lower level of Assyrian architecture (Phase 8) with an entirely different ground plan from that of the upper level.

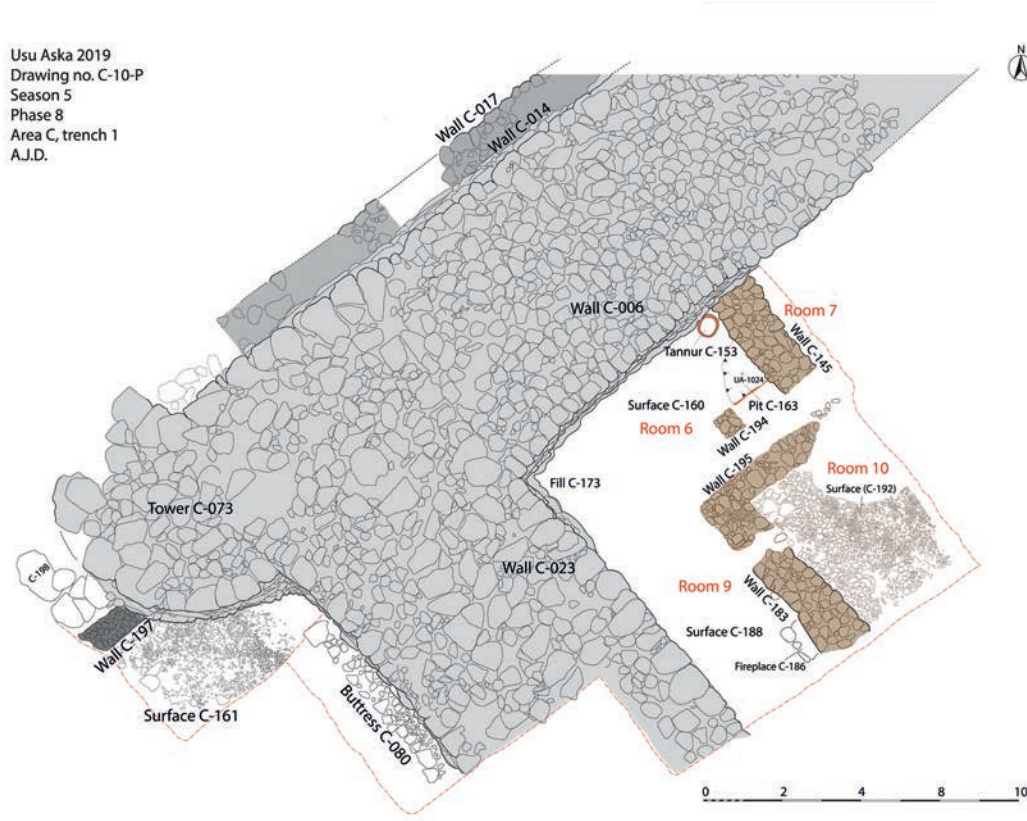

Fig. 26 Phase 8 in Area C

The recovered plan *(Fig. 26)* consists of a space with a cobbled surface in the eastern corner (Room 10) bounded by wall C-183 to the west and wall C-195 to the north. Wall C-195 is 60 cm wide and preserved up to 15 cm high; C-183 is more substantial, tapering from 1.4 to 1.1 m wide, built of large (40 cm+) stones with a core of small and medium size stones, preserved up to two courses (20 cm) high; on the upper surface a preparation of smaller, angular stones packed in mud mortar formed a bedding for the mudbrick superstructure. A third wall C-145, four stones wide and at least four courses (25-40 cm) high, comes out at right angles from the main fortification wall for a distance of 1.3 m; the outer edges are made of larger (20-50 cm) stones with smaller stones (10-15 cm) in between. The wall probably continued into Room 4 under wall C-084. but as it was truncated by the Parthian kiln this is not verified.

Room 6

Room 6 is the space west of wall C-145 in the western quadrant of the exposure. The exact dimensions of the room are difficult to give due to the fact that it is not yet clear whether or not there is a wall defining its western side below the (Phases 6-7) wall C-026: it measures at least 2.9 m along the northeast-southwest axis (parallel to the main fortification wall) and 3.6 m across the other axis. The surface (C-160) was a compact mid-brown clayey silt with patches of orange and some white limestone flecks, with a spindle whorl (UA-586) and many ceramic sherds lying on it. A small ash dump (C-163) contained a clay sealing depicting a scorpion (UA-1024, *Fig. 27*) and a baked ceramic

object (UA-1028), together with quantities of burnt pottery and bone. The sealing is important. The scorpion was the symbol of the queen and the queen's household administration[29], so the discovery of this sealing is both the first direct evidence for administrative practices recovered at Usu Aska to date and also indication of an involvement on the part of the queen.

Fig. 27 Clay sealing with impression of a stamp seal depicting a scorpion.

Room 7

Room 7 is the very small space (3 m x 70 cm) east of wall C-145 in the northern quadrant of the exposure, excavation of which nevertheless uncovered a burial (C-150, UA-572) with a poorly preserved skeleton in a crouched position inserted into the northwest end.

Room 9

Room 9, in the southern quadrant of the trench, measures 5.4+ x 2.75 m. A surface formed of compact mid-brown silty clay with frequent medium stones and several ceramic sherds lying flat pressed in (C-188) slopes towards the northwest. Adjacent to the southeast face of wall C-183 was a rectangular fire installation (C-186) measuring 50 x 40 cm and 20 cm deep with a ceramic vessel (UA-1030) lying *in situ*.

Room 10

Room 10, in the eastern quadrant of the trench, measures 4.7 x 3.5 m, bounded by wall C-183 on the southwest and C-195 on the northwest. At the western corner was a tannur (C-190). A supra-floor deposit of grey sandy silt (C-189) lay above a stony surface (C-192) which included a worked stone (UA-1042) and a broken stone pestle (UA-1054) in the make-up. The surface slopes dramatically down towards the west and northwest. This may be a result of the slumping of the mudbrick wall/platform C-167 in Room 6 (see below). C-192 probably extends beyond the limit of excavation at the

[29] See most recently Radner 2008: 494-502.

southeast end of the trench and to the northeast under the lowest course of wall C-128. Adjacent to the northeast face of wall C-183 was a circular stone installation (C-199) interpreted as a pot emplacement.

Phase 9 (mudbrick platform)

Below Phase 8 were deposits of degraded mudbrick (C-164, C-178) overlying the remains of a slumped mudbrick feature (C-167, C-193) which extended from the main fortification wall across the whole northwestern side of the trench *(Fig. 28)*. It continues on below wall C-084 and so under Rooms 9 and 10 to the southeast. Mudbricks measuring 40 cm square and 8 cm thick, separated by lines of green-grey mortar, were visible for a 3 m long stretch in the southwest facing section below C-084. This slumped mudbrick appears to be part of a deliberately constructed platform which, together with the degraded mudbrick above, formed level terracing for the construction of Phase 8. The existence of an intermediate architectural phase is indicated by the discovery of a small section of a wall (C-194) apparently resting on the upper level of platform C-167 *(Fig. 29)*. The elucidation of this and the investigation into what earlier phases may yet lie below are important objectives for future work.

Fig. 28 Room 6 in Area C Phase 8 showing the remains of tannur C-169 sitting within the slumped mudbrick C-167, and the wedge of degraded mudbrick C-164 above this and below wall C-026.

Fig. 29 Mudbrick wall or platform C-193 appearing in section under wall C-084 as viewed from Room 10. The stones of wall C-195 can be seen below the mudbrick.

Phase 10 (fortification walls) *(Fig. 30)*

The earliest remains reached during the excavation were the monumental fortification. Work on clearing and exposing the fortifications started in Season 1 with the laying out of an 8 x 2.5 m extension from the south side of the main Trench 1. In time this extended round to the tower base at the western corner of the fortifications and then into a cleaning operation which in the end exposed over 100 m of the main stretch of the fortification wall. The fortress walling is constructed from large to very large (80-120 cm) unworked stones that probably came from the slopes of Mount Assos immediately to the east. There were no river pebbles evident in the construction of the walls. The fortification wall measured 6 m across in both the sections exposed. The northwest-southeast line of the wall (C-023) - that is the shorter side running towards the mountain - is preserved eight to ten courses high. The preservation is lower on the external side, where the full preserved height from base to top is 3.3 m, but the difference in elevation from the base as revealed on the outer face to the top of the wall on the internal side is 5.45 m. The upper course of the inner face of the wall at the southeastern end was found at a depth considerably lower than that of the upper course of the inner face of the wall towards the corner. It seems likely, therefore, that the wall had been truncated here and the upper courses removed by the mechanical excavation undertaken during the aborted construction works conducted prior to our arrival when a thick bed of river pebbles was laid across the western end of the site. This area of truncation corresponds with the modern fill C-034 to the north of the wall. Against the base of the external face of C-023 was a concentrated packing of small to medium stones, perhaps a revetment (C-080, *Fig. 31*), and therefore analogous to the revetment B-022 built up against wall B-005 at the eastern end of Area B *(Fig. 21)*.

Fig. 30 The fortification wall and buttress after clearing operations.

The southwest-northeast line of the wall - that is, the main stretch running parallel to the river - was designated C-006/C-014 (C-014 represents the outer face). It continues in an unbroken line for approximately 130 m to the north, corresponding with wall B-056 in Area B, where this section terminated in a round tower (see above), and more sporadically for around a further 80 m on towards Area A. It has not been demonstrated that the wall joins the remains at Area A - it does seem probable that this was originally the case, but this cannot be verified due to a stretch nearer to Area A having been completely eroded by the waters of the lake. A section on the outer side of C-014 was exposed down to its base, where it could be seen that the wall is founded on the natural orange-brown clay. Although the preservation is lower on the external side, it is nevertheless intact up to six to seven courses, a little over 3 m high. The base of the wall on the inner side (C-006) has not yet been reached, but the difference in elevation from the base as revealed on the outer face to the top of the wall on the inner side is 5.8-6 m.

Fig. 31 Revetment C-080 against the base of wall C-023

Fig. 32 Tower C-073 with surface C-161 and cross-wall C-197 (arrowed)

Turning to the original height of the wall, it is, firstly, clear that a large number of stones have eroded and fallen down the slope towards the lake (previously the river), and that the stone wall of the fortification originally stood much higher than currently preserved. It is not known for certain whether there was a mudbrick superstructure on top of the stone section of the wall, but it seems probable that there would have been, and that at least the uppermost components – the battlements and crenellations – would have been made of mudbrick. Certainly, we recovered no evidence for stone merlons (as found, for example, at Nineveh). Taken together, these considerations leave us to believe that the original full elevation of the wall must have been in the region of 10-15 m high. Pockets of white plaster found between the large stones on the outer face suggest that the wall was plastered white.

As mentioned, the fortification wall has a round tower (C-073, *Fig. 32*) at its western corner, made of massive blocks of stone in the same manner as the main stretches of the wall, with a diameter of 5.7 m and preserved from four to eight courses, a maximum of 2.5 m high. Investigation at the base of this tower uncovered remains of a burnt layer (C-119) overlying a buff clay layer (C-121) that in turn overlay a cobble surface C-161 exposed over an area of 1.2 x 3.5 m. It is likely that the cobble surface extends to the southeast along the outer face of the fortress wall (C-023). At the northwest end of surface (C-161) was a cross-wall (C-197) coming out perpendicularly from the base of the tower, 80 cm wide and made of medium stones (up to 15 cm long) neatly laid with white plaster facing on both the interior and exterior surfaces, only exposed to a depth of one course. C-197 abuts a line of large uncut stones (C-198) on its outer side. Further investigation is required to clarify the relationship of these two features with each other, and with surface C-161 and tower C-073, but perhaps they were part of the system of control on the road coming up from the river.

A narrow feature made of stones 30-40 cm in length, one course wide and two to three courses deep, above a rubble packing (C-017, *Fig. 33*) runs up the outer face of the main fortification wall between two of the buttresses to the top of the wall. Ceramics recovered from a deposit (C-112) lying underneath this feature, but stratigraphically above C-014, date to the Parthian period, and it is presumed that C-017 also dates to this time. It therefore seems that this was a pathway leading down to the river. This would suggest that it was built in a period of relative security, which would fit well with the time of the Parthian empire (occasional Roman forays excluded).

Fig. 33 Stone pathway C-017 running up the outside of wall C023.

Summary of Area C

The excavations in Area C have identified this as the western corner of the Assyrian fortress. Two major levels of Assyrian occupation are documented, both exhibiting a somewhat domestic nature, with tannurs and burials beneath the floors. After a period of abandonment, the area was used for occupation and as a burial ground in the Hellenistic and early Parthian periods. A lime kiln constructed in the latter period may have been related to the construction of the nearby Parthian site of Qalatga Darband. The Assyrian occupation is characterised by multiple phases, all aligned to the main fortification wall, though constituting two entirely different configurations. In the case of the lowest Assyrian level so far encountered (Building B – Phase 8), it is difficult to distinguish which of the areas in the exposure were internal rooms and which were external spaces. The tannur and ash deposits in Room 6 suggest that this was an open space, which would mean that Room 10 was the western corner of a free-standing building, with open spaces between that building and the fortifications. On the other hand, the sloping pebble floor of Room 10 might suggest that it was a courtyard and that the L-shaped space designated Rooms 6 and 9 was internal. Of the small finds recovered from this phase, the clay sealing depicting a scorpion is the first direct indication of administrative practices at the site, while the Egyptian blue bead/amulet is a low-cost luxury item. The configuration of the upper Assyrian levels (Building A - Phases 6-7), while still following the rectilinear pattern dictated by the fortification walls, is in detail entirely different. There is again uncertainty over distinguishing internal and external areas, though the small finds recovered – arrowheads, stone projectiles, a fibula, a rough bead or cylinder seal - neatly reflect the lives of the soldiers who lived in the fort.

Area D

Area D is located near the southeast corner of the higher inland part of the site, i.e. towards the eastern side of the area corresponding to the rectangle visible in the Corona image *(Fig. 4)*. Work started here in Season 4 as an investigation into a line of massive stone blocks (the largest measured 1.6 m long) visible on the surface. The original trench, at that time designated B2, measured 4.7 x 4.5 m *(Fig. 34)*. That work exposed two stone walls forming right angle, C-152 running northeast-southwest and C-160 running east-west. C-152 is clearly a massive structure, one which conceivably belongs to an early phase of the fort. Two courses of stones were fully revealed, along with what looks like a third below. Exactly how this wall relates to the main fortification wall requires further investigation.

Fig. 34 Area D (Season 4) - section of a wall of massive stone blocks C-152.

In Season 5 the investigations were continued and extended to the west, a particular aim being to explore how the masonry exposed in Season 4 related to the archaeological remains in the higher, central part of the site. The Season 5 work started out as a 4 x 10 m trench, later narrowed and extended to measure to 2 x 16 m, running northeast-southwest. The upper fill of the trench consisted of a thick band of stones and rocks up to 1.15 m in length in a matrix of tough red clay, undoubtedly washed down the side of the mountain. The layer contained abundant evidence of recent activities in the form of plastic and glass, but also a fibula (UA-900) of presumed Assyrian date. Below this was a layer of grey (D-002) and then brown (D-003) soil, containing many stones, the latter also containing a certain amount of ceramics. These layers had buried the most significant feature in the area, a huge wall (D-004) that ran at an angle across the western half of the trench *(Fig. 35)*.

Fig. 35 Area D (Season 5) - a section of the southeastern fortification wall D-004 with wall foundation D-013, surface D-014 and grave D-015.

The remains of the wall consisted of both fallen masonry and coherent *in situ* architecture. Many of the blocks of this wall are very substantial, measuring up to and over a metre in length. The wall is 4 m wide, the section excavated so far being 12 m long; in the northeastern part the wall is preserved at least four courses (approximately 2 m) high. Although the line of wall D-004 does not exactly match the position and angle of the southern side of the rectangle visible in the Corona image, it is suspected that it does indeed correspond to this feature. Abutting at right angles to the main wall on its northern side was a feature made of stones up to 25 cm long, altogether 1.1 m wide and exposed in a strip 1.4 m long (D-013). This is taken to be the stone footing of a cross wall. Associated with D-004 and D-013, in the triangle bounded by these walls and the north side of the trench, was a beaten earthen surface (D-014) containing a lot of pebbles, as well as potsherds and bones. A grave (D-015, *Fig. 45*) had been cut into this surface right next to the wall. The dimensions of the grave were 130 x 40 cm. The deceased had been laid in a crouched position, oriented north-east-southwest, with the head at the northeast end, turned to the right (i.e. facing north). The left arm rests on the left ribs and the right arm rests in front of the right ribs. The state of preservation of the skull was very poor, with the exception of the teeth, which were in good condition. The fill of the grave contained a terracotta square made from a potsherd (UA-904), perhaps a gaming piece or a rough token: it was not clear whether this was a grave good or just part of the fill.

Area E

Area E is located in the mainland part of the site at a point approximately 40 m inland from the fortification wall and equidistant between Areas B and C. The original aim of the Area E excava-

tion was as a sounding to establish the depth of the stratigraphy in order to inform the conduct of the excavations in Areas B and C. The excavation started out as a 4 x 4 m square, expanded in due course to measure 5.5 x 6 m. Surface finds included a fragment of a stone vessel (UA-847) and an iron nail (UA-811). Pebbled and beaten earth surfaces (E-003 and E-009) below the topsoil produced ceramics dating to the Ottoman period, including an almost complete blue-glazed juglet (UA-805), as well as an iron knife (UA-810), a metal ring (UA-803), an iron pin (UA-829) and a fragment of a Parthian tile (UA-839). The area was cut by a number of small pits, one of which yielded a spherical pierced baked clay weight (UA-813).

Below this was a level dating to the Parthian period. This consisted of a space delineated by quite substantial (E-005, E-005, E-011) and smaller (E-012, E-017) stone walls. An upper phase was represented by a cobble surface (E-008), on which was lying a copper alloy pin (UA-842), and a pit (E-035, fill E-034) rich in ash and containing a large quantity of animal bones and potsherds, as well as a corroded copper-bronze coin (UA-856) and part of a copper alloy ring (UA-874). The lower Parthian phase was characterised by a stone-lined drain (E-012) running southwest-northeast through the trench. The drain was damaged by a cut (E-044), on the floor of which was an assemblage of complete Parthian globular bowls (UA-804, UA-807, UA-809.1-3, UA-819, UA-820, UA-822, UA-823). These were made of very friable red fabric with white (probably limestone) inclusions, and rounded, slightly everted rims. The surfaces on each side of the drain were pebbled (E-015, E-028). In the fill of the room was found a small square ivory stamp seal (UA-812) depicting a bearded man in a long tunic standing in front of a fire altar, with a pierced, cuboid handle *(Fig. 36)*.

Fig. 36 Ivory stamp seal depicting a man before a fire altar.

Removal of the Parthian surfaces and smaller walls revealed a level dating to the Assyrian period. The principal architectural feature was a very substantial wall (E-011, *Fig. 37*) running along the northwestern side of the trench. The northern face of E-011 was not reached in the limits of the excavation, but the wall is at least 1 m wide. Against wall E-011 a succession of beaten earth surfaces (E-015, E-027, E-028, E-032, E-033) overlay patches of pebbles 5-12 cm thick (E-015, E-028, E-039) following the natural slope of the hill down towards the river. A 1 x 1 m sounding was dug through E-039 in order to probe the stratigraphy below. This revealed first a brown, silty deposit with occasional scattered pottery sherds and limestone flakes (E-040), which in turn overlay a deposit of consistently hard orange clay (E-041) extending southeast from wall E-011, with isolated concentrations of burnt/baked clay, charcoal flecks and ash lenses; a copper alloy plaque (UA-860),

a spherical carnelian bead (UA-873), a fragment of a copper alloy earring (UA-865) and fragments of copper alloy wire (UA-864, UA-866) came from this context. All of these contexts had the appearance of being outside surfaces. A number of fragments of blue pigment (UA-840, UA-863, UA-867-869) were found in these deposits. E-041 in turn overlay the natural orange clay (E-042), characterised by the absence of artefacts or any other indication of human activity.

Fig. 37 Area E showing wall E-011 and associated surfaces.

The excavation at Area E therefore succeeded in its primary aim of establishing the depth of archaeological stratigraphy in this part of the site. This actually turned out to be shallower than expected, approximately 1.8 m deep. In the course of this work evidence was found for substantial architecture of both the Parthian and the Assyrian periods. In both cases the surfaces had the appearance of being outside surfaces. With regard to the Assyrian period, an implication of this is that wall E-011 is the outside wall of a substantial structure, the principal remains of which lie to the north.

Geophysics

In Season 4, as an extension of the geophysical activity at Qalatga Darband, the opportunity was taken to also conduct gradiometry at Usu Aska. The aim of the operation was to image, if possible, the remains of the Assyrian period. Prior to the commencement of the work it was recognised that there were a number of factors which might inhibit the effectiveness of the gradiometry here. These included the presence of post-Assyrian archaeological levels (demonstrated for the Parthian and Ottoman periods), the irregular topography of the site, and the intensive use of the area as a picnic location in modern times. We were nevertheless keen to trial the prospection, and two areas were identified in the zone east of Areas B and D where the ground was sufficiently level to allow data collection to take place: a block of four 20 x 20 m squares with one more 20 x 20 m block at its north-

eastern corner (Survey Area 4), and one further 20 x 20 m block to the west of this (Survey Area 11). The equipment used was a GeoScan FM-256 handheld magnetic field gradiometer. Following the protocol worked out at Qalatga Darband, sample interval was 0.125 m with transect intervals of 0.50 m. The readings were averaged by the FM-256 during collection with an averaging cycle of 4, stored as a single value in the machine memory for downloading.

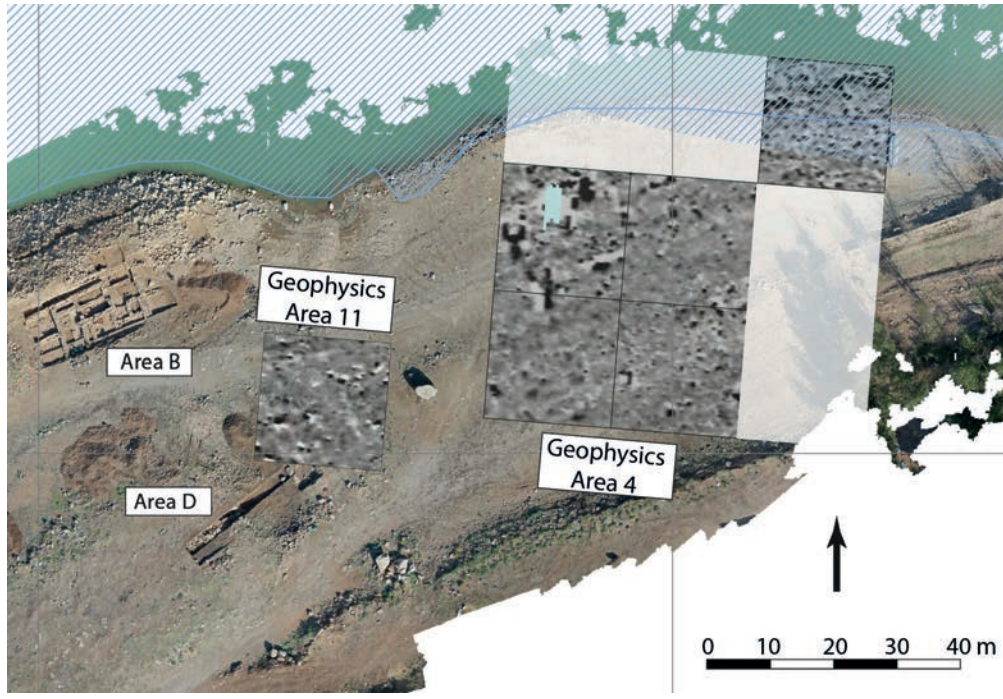

Fig. 38 Location and results of the magnetic gradiometry survey at Usu Aska.

As expected, the results *(Fig. 38)* were less clear than at Qalatga Darband. In Survey Area 4 one principal feature does stand out, a roughly 18 x 13 m structure in the northwestern quadrant. There are also various long linear features but these are regarded with less confidence. While it is possible that they relate to ancient buildings, it is more likely, given the construction and landscaping in recent times, that they may correspond to modern activity on the site. In Survey Area 11 there were no coherent features. This is a part of the site particularly heavily disturbed by modern use, and the difficulty of generating clear data was not unexpected. There are a number of strong dipolar readings that indicate the presence of a considerable amount of modern ferrous metal trash that would need to be cleaned to get better results.

In summary, the mapping by magnetic gradiometry at Usu Aska did suggest the presence of one major structure in the area surveyed. While this is a limited result, it is meaningful and will allow the area to be investigated by excavation at some future stage. It is also hoped to experiment with other methods of prospection, particularly resistivity tomography and ground penetrating radar.

Archaeozoology

An integrated and holistic protocol for sampling and analysing ancient bioarchaeological data (animal and human bones, seeds, shells, charcoal, bitumen and phytoliths) was instituted for the

Darband-i Rania Archaeological Project with the aim of recreating the environmental landscape and human and animal interaction. A rigorous and standardised protocol for sampling was implemented with an explicit focus on recovering organic remains from all primary contexts, including floors, suprafloor deposits, pits and tannurs. In the case of surfaces, spatial control was achieved by laying out 1 x 1 m grids. With regard to the archaeozoological record, the recovery of faunal assemblages from a large number of primary contexts in Usu Aska yielded a total of 1049 specimens from Areas A, B, C and E (this figure refers to specimens from all periods). These specimens were identified and analysed to determine diet, species, preference of cut, disposal, and the consumption patterns and distribution patterns of animals and their by-products across the site. By far the largest part of the assemblage comes from Area C with just over 633 specimens (60% of the sample), followed by 317 (30%) from Area B, 96 (10%) from Area E, and just 3 (< 1%) from Area A. This report focuses on the faunal data of Assyrian date in Areas B and C. Altogether 609 faunal specimens were recovered from the Assyrian levels in these two areas, belonging to domestic and to wild species - in general, the species population was composed of mainly herded animals (cattle, sheep and goat) followed by deer (both large and small), equids, hare, pig (domestic and wild) and bird in varying degrees *(Fig. 39)*.

Domestic species

The standard repertoire of domestic mammals is present in each of Area B and C, comprising the customary herded species - sheep (*Ovis aries*), goat (*Capra hircus*) and cattle (*Bos taurus*). Domestic animals make up 97% of the total assemblage for these areas. The significant presence of these taxa is not surprising given the pastoral society that has existed in the Kurdistan landscape for millennia. What is surprising is the high frequencies of equids, both donkeys (*Equus asinus*, 3 % of the sample in Area C) and horse (*Equus caballus*, < 1 % of the sample in Area C). There are also some equid specimens from Area B, including *E. asinus* (2 %), *E. caballus* (1%) and an indeterminate equid (1 %); there is no indication that these were being eaten. Ovicaprines (sheep and goat) formed 225 specimens (37% of the total corpus). Domestic cattle are represented by 52 specimens (9 %) and domestic pig by 34 specimens (5 %). The low frequency of domestic pig (*Sus scrofa* dom.) is interesting, as elsewhere in the Assyrian Empire pig forms a significant part of the diet - for example, at the Assyrian provincial capital of Ziyaret Tepe in southeastern Turkey, pig constituted 12-19 % of the animals consumed[30]. Domestic bird (uncertain taxon) has 4 specimens (all found within Area C), a frequency of 1% of the total corpus.

Wild species

There is a modest diversity of wild taxa, 18 specimens (3% of the total) and no indication of the consumption of species which are out of the ordinary. There is a moderately diverse range of different deer (cervids) species present - both large red deer (*C. elaphus*) and small roe deer (*Capreolus capreolus*) are present in Area C, and fallow deer (*Dama dama*) in Area B. Together these deer specimens form 1 % of the assemblage. Wild boar (*Sus scrofa* fer.) and hare (*Lepus sp.*) also each represent approximately 1%. There are extremely low frequencies of wild bird, and a complete absence of

[30] Greenfield 2016.

other utilitarian taxa such as fish, rodents, or amphibians/reptiles that might have been used to supplement the diet.

The data therefore suggests that the repertoire of medium and large wild and domestic animals was sufficient to meet the needs of the residents of the fort. While the overwhelming presence of domestic animals (97% of the total assemblage) is not surprising, the slightly different breakdown in species between the two areas suggests varying economic behaviour with regard to consumption and/or disposal activities within the larger fortification. There is a more diverse presence of taxa within Area C, including bird, hare and both red deer and roe deer, that is not found in Area B. The only taxon not found in Area C is fallow deer. Further investigations into the activity areas within specific rooms of the fortification will shed further light on the daily diet and behaviour of those living at Usu Aska.

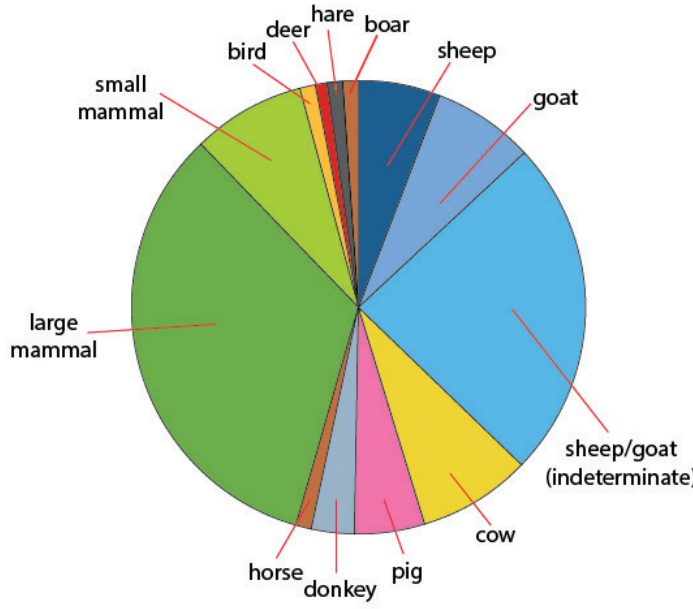

Fig. 39 Proportions of species represented in the archaeozoological datasets from Areas B and C.

Archaeobotany

Analysis of the archaeobotanic and phytolith samples from Areas B and C is currently in progress.

Ceramics

The bulk of the ceramics recovered from the excavations at Usu Aska dates to the Ottoman, Parthian, Sasanian and Assyrian periods, with a very small amount of Hellenistic material in addition. The **Ottoman** (Late Islamic) sherds were found directly under the surface. These include fragments of porous water jars, some yellow-glazed sherds of a dark buff fabric, and a few pieces of pipes made of a fine clay with a red slip. Sherds dating to the **Sasanian** period were present in the uppermost

mixed levels of Area A at Usu Aska. Several sherds of large storage jars were found, some bearing the backbone decoration characteristic of this period. In addition to these storage jars fragments, a few sherds of a turquoise-glazed pottery dating to this period were also found in the excavations. The **Parthian** material is very much in line with that found at Qalatga Darband (see MacGinnis et al. 2020). The **Hellenistic** material only comprised a few sherds from upper contexts in Areas B and C, but these did include a striking rim piece of a Hellenistic two-handled jar with rosettes stamped on the neck and shoulder (UA-326, *Fig. 40*).

Fig. 40 Sherd of a Hellenistic stamped jar (UA-326).

The **Assyrian** material from Usu Aska is important and will in due course be the subject of a dedicated monograph. Work on a typology is in progress. The excavations to date have yielded over 18,000 sherds of Assyrian pottery. Initial classification has been based primarily on differences in fabrics, with macroscopic examination to determine inclusions and with attention paid to other attributes such as surface treatment, decoration and method of manufacture. The pottery was classified into six main ware groups, as follows:

UA100 Fine Ware
UA200 Common Ware
UA300 Cooking Ware
UA400 Coarse Chaff Handmade Ware
UA500 Glazed Ware
UA600 Slipped Ware

Fine ware (FW)

Very highly levitated clay, fabric light greenish grey, reddish yellow and pale brown; very thin (egg-shell) walls <3 mm thick. This ware includes Palace Ware.

Common Ware (CW)

This is the most abundant fabric type represented in the Usu Aska repertoire, used in the production of the majority of the household vessels *(Fig. 41)*; mostly wheel-made with coils, with varying levels of inclusions and textures (fine, medium and coarse): these textures are often related to vessel size (respectively, small, medium and large). A large subset of Common Ware is formed by storage vessels.

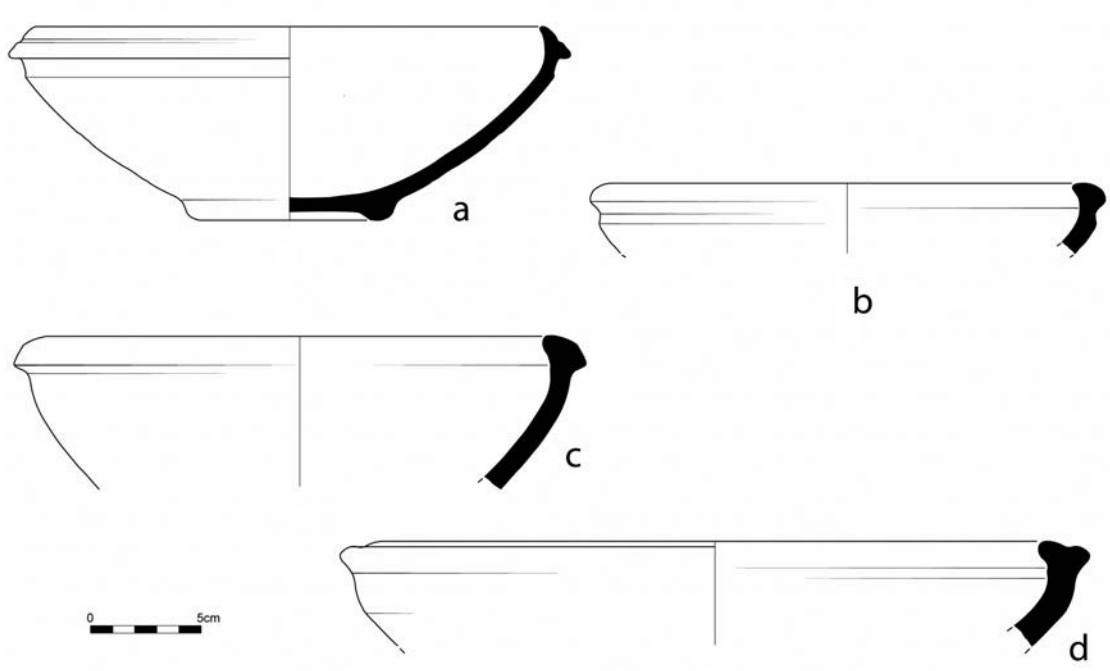

Fig. 41 Common Ware dishes, with temper, paste colour and diameter as follows: a limestone, light greenish buff, 25 cm; b limestone, reddish buff, 20 cm; c sandy, light brown, 22 cm; d sandy, light brown, 29 cm.

Cooking Ware (COW)

Coarse fabric with large quantities of mineral inclusions that are clearly visible in section and on the surface; vessels usually have short necks and hole-mouths.

Coarse Chaff Handmade Ware (CCHW)

Coarse fabric heavily tempered with both large organic (chaff) and mineral inclusions. This ware is most commonly used for large hand-made vessels such as jars and trays.

Glazed Ware (GW)

Common ware with green glaze.

Slipped Ware (SW)

Fabric similar to Common Ware, but generally finer in texture; Slip Ware is very rare, with only a few examples having been found until now; this ware is used mainly for bowls.

Overall *(Fig. 42-43)*, Common Ware forms by far the largest part of the assemblage (78 %), followed by significant amounts of Storage Ware (9.5 %) and Cooking Ware (8 %), a small amount of Fine Ware (2.5 %), and very small quantities of Coarse Chaff Handmade Ware (1 %), Palace Ware (0.3 %), Glazed Ware (0.25 %) and Slip Ware (0.06 %).

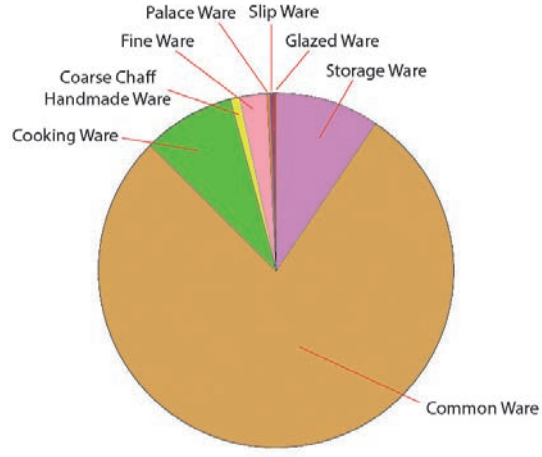

Fig. 42 Proportions of ware types at Usu Aska (based on sherd count).

	Area B	Area C	Area D	Area D	Total
Common Ware	5179	5101	287	3507	14074
Storage Ware	620	634	33	432	1719
Cooking Ware	398	591	14	476	1479
Fine Ware	191	165	15	82	453
Coarse Chaff Ware	51	116	1	7	175
Palace Ware	6	52	1	1	60
Glazed Ware	5	4	3	32	44
Slip Ware	4	8	0	0	12
Total	6454	6671	354	4537	18016

Fig. 43 Numbers of sherds by ware type across Areas B-E.

The most striking feature in the fabrics of the Assyrian period is the dense admixture of vegetal temper, in addition to the high proportion of white limestone mineral inclusions of different sizes. In terms of forms *(Fig. 44)*, the shapes found at Usu Aska are very much in line with the shapes found at other Assyrian sites such as Tell Sheikh Hamad, Tell Ahmar, Tille Höyük and Ziyaret Tepe. This includes flaring or incurved bowls with a variety of rim shapes (mainly folded, occasionally with a groove on the lip), as well as plates, jars, jugs, bottles, cups, beakers, storage jars, basins, trays and cooking vessels and lids.

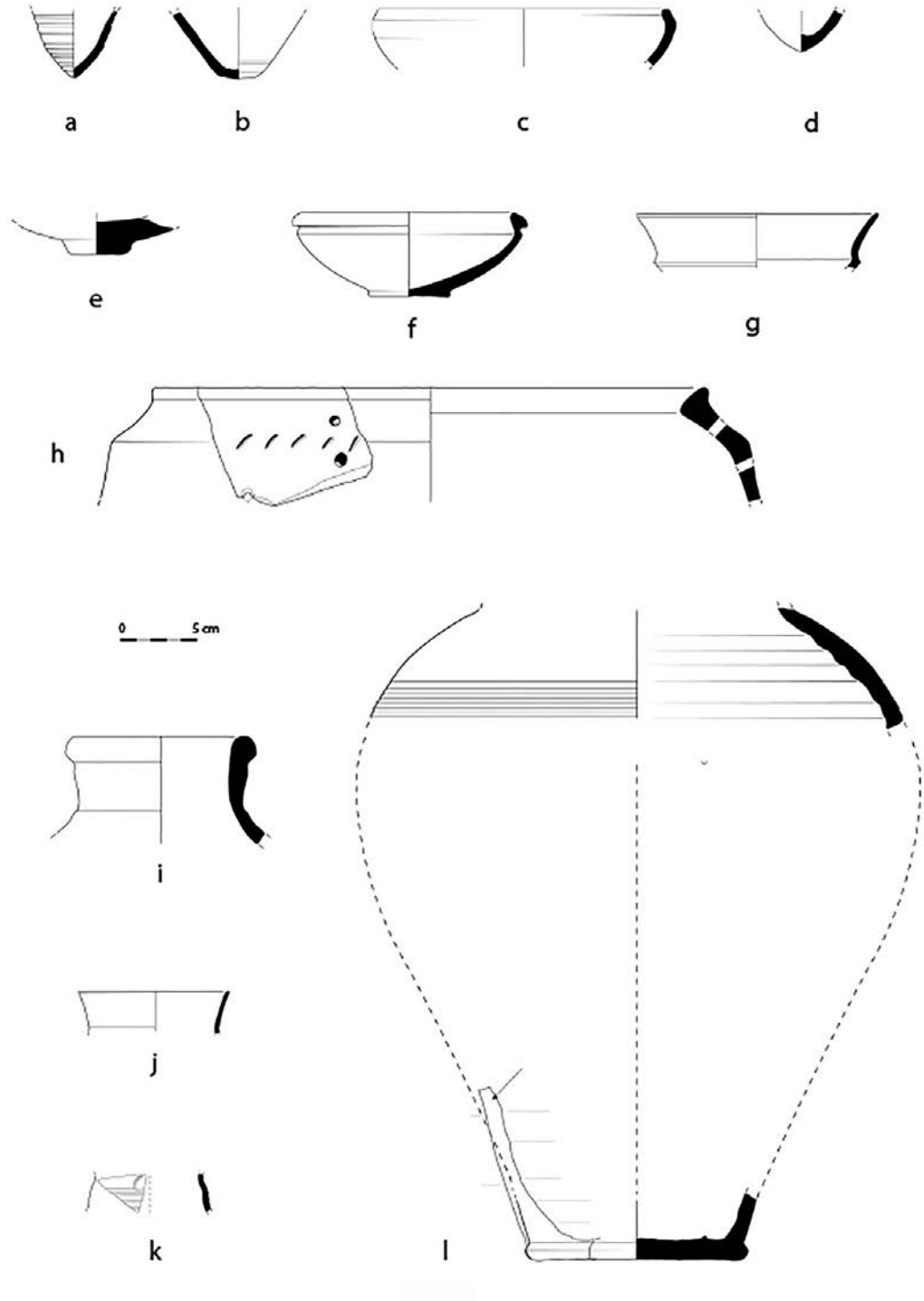

Fig. 44 Representative forms found in the assemblage of Neo-Assyrian ceramics, with temper, paste colour and diameter as follows: a brown, fine, 6+ cm; b pink, fine, 12 cm; c light brown, fine, 18 cm; d brown, coarse, 6+ cm; e pink, fine, 12+ cm; f light brown, medium, 15 cm; g light brown, medium, 18 cm; h light reddish brown, medium, 33 cm; i light brown, medium, 12.6 cm; j pink, fine, 10 cm; k pink, fine, 7+ cm; l pink, medium, 35 cm.

Burials

Altogether five burials have been found to date in the Assyrian levels, two in Area B, two in Area C and one in Area D. All five are simple inhumations *(Fig. 45)*. One burial was accompanied by a ceramic plate and a fibula, the others all had no grave goods. An interesting comparison can be made with the burials in the lower town at the site of the Ziyaret Tepe, an Assyrian provincial capital in southeastern Turkey. There, the burials in the area designated Operation K, tentatively identified as a barracks, were exactly like these burials in Usu Aska, simple inhumations in a crouched position with few or no grave goods[31]. Of the six graves in the nearby Operation Q, the site of the southern gate into the city, two were simple inhumations with no grave goods; one was accompanied by an iron fibula and two vessels; one was a double pot burial of a child with three vessels, two beads and an astragalus; one had a bronze fibula, six pots and tortoise shell; and one had three vessels, a cylinder seal and cuts of sheep, cow and pig [32]. Ziyaret Tepe also had much richer graves in other locations, but this data makes the point that our graves at Usu Aska are at the poorest end of the spectrum; there can be no real doubt that these are the resting places of Assyrian soldiers.

Fig. 45 Grave D-015.

Conclusion

The strategic importance of the Darband-i Rania has been recognised and exploited for millennia. This goes back to at least the early second millennium BC, as evidenced by the victory relief carved into the rock on the northern side of the pass. The British Museum investigations have uncovered

[31] Matney et al. 2015: 133.
[32] Matney et al. 2009: 62-63; Matney et al. 2011: 92.

remains of occupations dating to the Assyrian, Parthian and Ottoman periods. Of these, by far the most important is the Assyrian period, which witnessed the construction of a fort of very sizeable proportions. The results of the excavations so far have demonstrated that there are at least two major levels of occupation in the Neo-Assyrian period, and it is not excluded that there could be more. One question of great interest is whether there is also a Middle Assyrian level - as noted above, both survey and textual data indicate that the Rania plain came under Middle Assyrian control, and it is inconceivable that the pass would not have been held by the Assyrians during this earlier occupation of the plain, though direct evidence for this is yet to be found.

Following the retraction of the Middle Assyrian empire, there was an interval of approximately 150 years, until the reabsorption of the Rania plain under Assyrian rule at the beginning of the reign of Ashurnasirpal II in the early ninth century BC. It is to be presumed that the (re)possession and (re)fortification of the pass dates to this time. An important question relates to the overall configuration of the site: what is the relation of the rectangular precinct at the western end of Usu Aska to the fortified knoll at the eastern end? The answer to this may lie in how the articulation of the site developed. One possibility is that the rectangular system is the original fort. But at the same time, the steep knoll of Area A is too obvious and too convenient a place for a watch tower and forward control point not to have been utilised from the beginning. It seems possible to us, therefore, that the original configuration was the rectangular fort with a separate watch tower overlooking the Peshdar plain, and that this was subsequently transformed into one integrated system with the extension of the main fortification to link the two along the full length of the southern side of the pass. The resulting installation must have been very powerful.

As far as we know, the region then remained a stable component of the Neo-Assyrian empire for the greater part of its history. At some point the zone of control moved further eastward to incorporate the Peshdar plain, bringing the frontier up to the *chaîne magistrale* of the Zagros mountains. The Darband-i Rania became an internal control point within Assyrian territory. As yet, we do not have a date for when this may have happened. As the end of Assyria approached, and the empire began to crumble, the border will have moved back towards the west. Was there a stage when the Assyrians had lost control of the Peshdar plain and the Darband-i Rania was on the front line? Again, we do not have an exact date for either the expulsion of the Assyrians from the Peshdar plain or the loss of the Darband-i Rania itself, but for the latter an absolute cut-off must be 615 BC, when the Babylonian Chronicle records, among other things, the Medes descending on Arrapha[33]. It is overwhelmingly likely that the route through the Darband-i Rania will have been one of the ways by which they came. It is striking that to date we have no indication of a general destruction at the site. Was the forcing of the pass contested fiercely? Was the garrison pulled back? Did it flee? It is to be hoped that future work at Usu Aska will generate both some answers and more questions as it yields material witness to these dramatic events.

Bibliography

al-Husaini 1962 — al-Husaini, M. B., "The Excavations at Tel Bakr-Awa", *Sumer* 18 (1962), 140–164.

[33] Grayson 1975: 92.

Alibaigi – Rezaei 2018 Alibaigi, S. – Rezaei, I., "Bikni, Bīt-tābti and *uknū*: searching for appropriate identifications for toponyms and terms mentioned in neo-Assyrian texts", *Journal of Near Eastern Studies,* 77 (2018), 15–30.

Alibaigi – Shanbehzadeh – Alibaigi 2012 Alibaigi, S. – Shanbehzadeh, A. – Alibaigi, H., "The Discovery of a Neo-Assyrian Rock-Relief at Mishkhas, Ilam Province (Iran)", *Iranica Antiqua* 47 (2012), 29–33.

Alibaigi – Aminikhah – Fatahi 2016 Alibaigi, S. – Aminikhah, N. – Fatahi, F., "In search of Harhar (the Neo-Assyrian Kar-Šarrukin) in the Central Zagros Mountains, Western Iran: A New proposal", *Iran* 54 (2016), 25–46.

Al-Soof 1970 Al-Soof, B., "Mounds in the Rania Plain and excavations at Tell Bazmusian (1956)", *Sumer* 26 (1970), 65–104.

Anastasio 2010 Anastasio, S., *Atlas of the Assyrian Pottery of the Iron Age*, Turnhout, 2010

Balatti 2017 Balatti, S., *Mountain Peoples in the Ancient Near East. The Case of the Zagros in the First Millennium BC,* (Classica et Orientalia 18). Wiesbaden, 2017.

Birney – Levine 2011 Birney, K. J. – Levine, E., "Scale Weights". In: Stager, L. E. – Master, D. M. – Schloen J. S., eds., *Ashkelon 3: The Seventh Century BC,* Winona Lake, 2011, 473–492.

Blaylock 2016 Blaylock. S., *Tille Höyük 3.2 The Iron Age: Pottery, Objects and Conclusions*, (British Institute at Ankara Monograph 50), London, 2016 .

Colantoni – Makinson – Skuldbøl 2018 Colantoni, C. – Makinson, M. – Skuldbøl, T. B. B., "The Assyrian eastern frontier. Gird-i Gulak, a fortified settlement in the Zagros foothills. Preliminary results of the Danish Archaeological Expedition to Iraq", *Ash-sharq Bulletin of the Ancient Near East 2.* (2018), 13–23.

Curtis 2001-2002 Curtis, J., "The evidence for Assyrian presence in Western Iran", *Sumer* 51 (2001–2002), 32–37.

Danti – Cifarelli 2016 Danti, M. – Cifarelli, M., "A survey on an 'Assyrian' glazed pottery type in the Zagros mountains". In: MacGinnis, J. – Wicke, D. – Greenfield, T., eds., *The Provincial Archaeology of the Assyrian Empire*, (McDonald Institute Monographs), Cambridge, 2016, 371–383.

Düring 2020 Düring, B. S., *The Imperialisation of Assyria*, Cambridge, 2020.

Düring – Stek 2018 Düring, B. S. – Stek, T. D., *The Archaeology of Imperial Landscapes,* Cambridge, 2018.

Edmonds 2019 Edmonds, A. J., "A People without Borders? Tracing the shifting Identities and Territorialities of the Ahlameans". In: Dušek, J. – Mynářová, J., eds., *Aramaean Borders. Defining Aramaean Territories in the 10th - 8th Centuries BCE*, (Culture and History of the Ancient Near East 101), Leiden & Boston, 2019, 26–62.

Eidem 2018 Eidem J., "Pakute – an Assyrian 'Ghost Castle' on the Raniya Plain", *As-sharq Bulletin of the Ancient Near East* 2 (2018), 30–42.

Eidem 2020 Eidem, J., "Before and After the Flood. Archaeology on the Rania Plain Then and Now". In: Eidem, J., ed., *Zagros Studies. Proceedings of the NINO Jubilee Conference and Other Research on the Zagros Region*, (PIHANS 130), Leiden, 2020, 99–130.

Frame 1999 — Frame, G., "The Inscription of Sargon II at Tang-i Var", *Orientalia* 68 (1999), 31–57.

Frame 2011 — Frame, G., "Assyrian Royal Inscriptions". In: George, A. R., ed., *Cuneiform Royal Inscriptions and Related Texts in the Schøyen Collection, (*CUSAS 17), Bethesda, 2011, 127–152.

Frame, 2013 — Frame, G., "Two Monumental Inscription of the Assyrian King Sargon II (721–705 BCE) in Iran: The Najafehabad Stele and the Tang-i Var Rock Relief". In: Faizee, S., ed., *Collection of Papers Presented at the Third International Biennial Conference of the Persian Gulf (History, Culture, and Civilization),* Tehran, 2013, 433–445.

Fuchs 2011 — Fuchs, A., "Das Osttigrisgebiet von Agum II. Bis zu Darius I". In: Miglus, P. A. – Mühl S., eds., *Between the Cultures: The Central Tigris Region in Mesopotamia from the 3rd to the 1st Millennium BC, (*Heidelberger Studien zum Alten Orient 14), Heidelberg, 2011, 229–320.

Galil 2009 — Galil, G., "Israelites in Media: a new look at ND 2443+", *Vetus Testamentum* 59 (2009), 1–9.

Glassner 2004 — Glassner, J.-J., *Mesopotamian Chronicles,* Atlanta, 2004.

Grayson 1975 — Grayson, A. K., *Assyrian and Babylonian Chronicles*, (Texts from Cuneiform Sources 5), Locust Valley, 1975.

Grayson 1991 — Grayson, A. K., *Assyrian Rulers of the Early First Millennia BC I (1114–859 BC), (*Royal Inscriptions of Mesopotamia Assyrian Periods Volume 2), Toronto, 1991.

Grayson 1996 — Grayson, A. K., *Assyrian Rulers of the Early First Millennia BC II (858–745 BC), (*Royal Inscriptions of Mesopotamia Assyrian Periods 3), Toronto, 1996.

Grayson – Levine 1975 — Grayson, A. K. – Levine, L. D., The Assyrian Relief from Shikaft-i Gulgul, *Iranica Antiqua* 11 (1975), 29–38.

Greenfield 2016 — Greenfield, T., "Feeding Empires: provisioning strategies at the Neo-Assyrian provincial capital of Tušḫan". In: MacGinnis, J., Wicke, D., Greenfield, T., eds., *The Provincial Archaeology of the Assyrian Empire,* Cambridge, 2016, 295–307.

Greenfield – Rosenzweig 2016 — Greenfield, T. – Rosenzweig, M. S., "Assyrian provincial life: a comparison of botanical and faunal remains from Tušhan (Ziyaret Tepe), southeastern Turkey". In: Stucky, R. A. – Kaelin, O. – Mathys, H.-P., eds., *Proceedings of the 9th International Congress on the Archaeology of the Ancient Near East, 9-13 June 2014*, Volume 2: Research, Wiesbaden, 2015, 305-321.

Greenfield – Wicke – Matney 2013 — Greenfield, T. – Wicke, D. – Matney, T., "Integration and interpretation of architectural and faunal evidence from Assyrian Tušhan, Turkey", *Bioarchaeology of the Near East* 7 (2013), 1–29.

Gunter 1982 — Gunter, A., "Representations of Urartian and Western Iranian fortress architecture in the Assyrian reliefs", *Iran* 20 (1982) 103–112.

Hauser 2012 — Hauser, S., *Status, Tod und Ritual, Stadt- und Sozialstruktur Assurs in Neuassyrischer Zeit,* Wiesbaden, 2012.

Hunt 2015 — Hunt, A., *Palace Ware across the Neo-Assyrian Imperial Landscape,* Leiden, 2015.

Jamieson 2012 — Jamieson, A., *Tell Ahmar III. Neo-Assyrian Pottery from Area C,* Leuven, 2012.

Kreppner 2006 — Kreppner, F. J., *Die Keramik des "Roten Hauses" von Tall Šēḫ Ḥamad/ Dūr-Katlimu,* Wiesbaden, 2006.

Lacombre 2011 — Lacombre, D., "Tiglath-Pileser I and the city of Pakute", *NABU* 2011/4, No. 81.

Læssøe 1959 — Læssøe, J., "The Bazmusian tablets" *Sumer* 15, (1959) 15–18.

Lanfranchi 1995 — Lanfranchi, G. B., "Assyrian Geography and Neo-Assyrian Letters; the Location of Hubuškia Again". In: Liverani, M ed., *Neo-Assyrian Geography,* Rome, 1995, 127–137.

Levine 1973 — Levine, L. D., "Geographical Studies in the Neo-Assyrian Zagros I", *Iran* 11 (1973), 1–27.

Levine 1974 — Levine, L. D., "Geographical Studies in the Neo-Assyrian Zagros II", *Iran* 12 (1974), 99–124.

Levine 2008 — Levine, E., *The Weight of the Evidence and the Evidence of the Weights: An Examination of the Interrelations of Economies in the Iron Age Levant*. Ph.D. diss., Harvard University, 2008.

Llop 2012 — Llop, J., The Creation of the Middle Assyrian Provinces. *Journal of the American Oriental Society* 131 (2012), 591–603.

Llop 2013 — Llop, J., "The Development of the Middle Assyrian Provinces", *Archiv für Orientforschung* 39 (2013), 87–111.

MacGinnis 2014 — MacGinnis, J. D. A., *A City from the Dawn of History: Erbil in the Cuneiform Sources,* Oxford, 2014.

MacGinnis 2016 — MacGinnis, J. D. A., "The Archaeological exploration of the provinces of Assyria". In: MacGinnis, J. – Wicke, D. – Greenfield, T., eds., *The Provincial Archaeology of the Assyrian Empire,* (McDonald Institute Monographs), Cambridge, 2016, 3–19.

MacGinnis 2020 — MacGinnis, J. D. A., "2020 The 2016 and 2017 seasons of excavations at Qalatga Darband". In: Otto, A. – Herles, M. – Kaniuth, K. – Korn, L. – Heidenreich, A., eds., *Proceedings of the 11th International Congress on the Archaeology of the Ancient Near East* Vol. 2, Field Reports, Wiesbaden, 229–242.

MacGinnis et al. 2020 — MacGinnis, J. D. A. – Raheem, K. R. – Ismael, B. B. – Ahmad, M. – Cabral, R. – Dusting, A. – Greenfield, T. – Hazell, G. – Iasonos, A. – Kertai, D. – Miller, A. – Pabeschitz, V. – Shepperson, M., "Excavations at the Darband-i Rania pass, Iraqi Kurdistan: Report on the 2016 and 2017 Seasons", *Iraq* 82 (2020), 139–178.

MacGinnis – Skuldbøl – Colantoni 2020 — MacGinnis, J. D. A – Skuldbøl, T. – Colantoni, C., "On the eastern frontier of Assyria: a newly discovered text from the Rania Plain in northeastern Iraq", *State Archives of Assyria Bulletin* 26 (2020) 89–112.

Madhloom 1965 — Madhloom, T., "The Excavations at Tell Bakr-Awa", *Sumer 21* (1965), 75–88.

Matney 1997 — Matney, T., "Clay tobacco pipes from Khirbet Hatara", *Mesopotamia* 32 (1997), 73–86.

Matney et al. 2005	Matney, T. – Rainville, L. – Demko, T. – Kayser, S. – Köroğlu, K. – McDonald, H. – MacGinnis, J. – Nicoll, K. – Parpola, S. – Reimann, M. – Roaf, M. – Schmidt, P. – Szuchman, J., "Archaeological Investigations at Ziyaret Tepe, 2003-2004", *Anatolica* 31 (2005), 19–68.
Matney et al. 2007	Matney, T. – Rainville, L. – Köroğlu, K. – Keskin, A. – Vorderstrasse, T. – Fındık, N. Ö. – Donkin, A., "Report on Excavations at Ziyaret Tepe, 2006 Season", *Anatolica* 33 (2007), 23–74.
Miglus 2016	Miglus, P., "Ein Felsrelief in der Schlucht Darband-i Ramkan nahe Rania und die Geschichte seiner Erforschung", *Zeitschrift für Assyriologie* 106 (2016), 91–99.
Miglus et al. 2013	Miglus, P. A. – Bürger, U. – Fetner, R. A. – Mühl, S. – Sollee, A., "Excavation at Bakr Awa 2010 and 2011", *Iraq* 75 (2013), 43–88.
Morello 2016	Morello, N., "Building the frontier: Frontier Fortifications in the Assyrian Empire". In: Frederiksen, R. – Müth, S. Schneider, P. I. – Schnelle, M., eds., *Focus on Fortifications. New Research on Fortifications in the Ancient Mediterranean and the Ancient Near East*. Oxford, 2016, 43–52.
Nishiyama 2020	Nishiyama, S., "Neo-Assyrian Provincial Control in the Eastern Imperial Fringe: A view from Yasin Tepe, Iraqi Kurdistan". In: Hasegawa, S. – Radner, K., eds., *The Reach of the Assyrian and Babylonian Empires Case Studies in Eastern and Western Peripheries, (*Studia Chaburensia 8), Wiesbaden, 2020, 45–72.
Nishiyama – Yamada in press	Nishiyama, S. – Yamada, S., "Nabû at the frontier of the Empire: A newly discovered inscribed bronze neck ornament from Yasin Tepe, Iraqi Kurdistan", in press.
Pappi 2012	Pappi, C., "Assyrians at the Lower Zab". In: Lanfranchi, G. et al., eds., *Leggo! Studies Presented to Frederick Mario Fales on the Occasion of His 65th Birthday*, Wiesbaden, 2012, 597–611.
Pappi 2018	Pappi, C., "The Land of Idu: City, Province, or Kingdom?", *State Archives of Assyria Bulletin* 24 (2018), 97–123.
Parker 1997	Parker, B. "Garrisoning the Empire: Aspects of the Construction and Maintenance of Forts on the Assyrian Frontier", *Iraq* 59 (1997), 77-87
Parker 2001	Parker, B., *The Mechanics of Empire: The Northern Frontier of Assyria as a Case Study in Imperial Dynamics*, Helsinki, 2001.
Parker 2002	Parker, B., "At the Edge of Empire: Conceptualizing Assyria's Anatolian Frontier ca. 700 B.C", *Journal of Anthropological Archaeology* 21 (2002), 375-95.
Parker 2003	Parker, B., "Archaeological Manifestations of Empire: Assyria's Imprint on Southeastern Anatolia", *American Journal of Archaeology* 107 (2003), 525-57.
Parker 2006	Parker, B., "Towards an understanding of borderland processes", *American Antiquity* 71 (2006), 77-100.
Pedersen 2011	Pedersen, O., "Tiglath-pileser I and the city of Pakute", *NABU* 2011, No.81.
Pfälzner – Qasim 2018	Pfälzner, P. – Qasim, H. A., "Urban Developments in Northeastern Mesopotamia from the Ninevite V to the Neo-Assyrian Periods. Excavations at Bassetki in 2017", *Zeitschrift für Orientarchäologie* 11 (2018), 42-87.

Postgate 1973 Postgate, J. N., "The Inscription of Tiglath-Pileser III at Mila Mergi", *Sumer* 29 (1973), 47–60.

Postgate 2000 Postgate, J. N., "The Assyrian Army at Zamua", *Iraq* 62 (2000), 89–108.

Potts et al. 2019 Potts, D. T. – Radner, K. – Squitieri, A. – Ameen, A. – Rohde, J. – Yawar, P. – Herr, J.-J. – Salih, H. – Petchey, F. – Hogg, A. – Gratuze, B. – Raheem, K. R. – Potts, H. B., "Gird-i Rostam 2018: Preliminary Report on the first season of excavations by the Joint Kurdish-German-American Team", *Jahrbuch Ex Oriente Lux* 47 (2019), 91–127.

Powell 1989 Powell, M. A., "Masse und Gewichte", *Reallexikon der Assyriologie* 7. 457–517.

Puljiz – Qasim 2018 Puljiz, I. – Qasim, H. A., "Exploring the Middle Assyrian Countryside: The 2017 Season of Excavations at Muqable III", *Zeitschrift für Orientarchäologie* 11 (2018), 88–109.

Radner 2003 Radner, K., "An Assyrian view on the Medes". In: Lanfranchi G. B., Roaf, M. and Rollinger, R., eds., *Continuity of Empire (?): Assyria, Media, Persia,* (History of the Ancient Near East Monographs 5), Padova, 2003, 37–64.

Radner 2008 Radner, K., "The Delegation of Power: Neo-Assyrian Bureau Seals". In: Briant, P. – Henkelman, W. – Stolper, M., eds., *L'Archive des Fortifications de Persépolis: État des questions et perspectives de récherches,* Persika 12, Paris, 2008, 481–515.

Radner 2013 Radner, K., "Assyria and the Medes". In: Potts, D. T., ed., *The Oxford Handbook of Ancient Iran*. Oxford, 2013, 443–456.

Radner 2015 Radner, K., "A Neo-Assyrian Slave Sale Contract of 725 BC from the Peshdar Plain and the Location of the Palace Herald's Province", *Zeitschrift für Assyriologie* 105 (2015), 192–197.

Radner 2017 Radner, K., "A Neo-Assyrian legal document from Tell Sitak". In: Heffron, Y. – Stone, A. – Worthington, M., eds., *At the Dawn of History: Ancient Near Eastern Studies in Honour of J. N. Postgate*, Winona Lake, 2017, 423–430.

Radner – Kreppner – Squitieri 2016 Radner K. – Kreppner, J. – Squitieri, A., eds., *Exploring the Neo-Assyrian Frontier with Western Iran. The 2015 Season at Gird-i Bazar and Qalat-i Dinka,* (Peshdar Plain Project Publications 1), Gladbeck, 2016.

Radner – Kreppner – Squitieri 2017 Radner K. – Kreppner, J. – Squitieri, A., eds., *Unearthing the Dinka Settlement Complex. The 2016 Season at Gird-i Bazar and Qalat-i Dinka,* Gladbeck, 2017.

Radner – Kreppner – Squitieri 2018 Radner K. – Kreppner, J. – Squitieri, A., eds., *The Dinka Settlement Complex 2017. The Final Season at Gird-i Bazar and First Work in the Lower Town,* (Peshdar Plain Project Publications 3), Gladbeck, 2018.

Radner – Kreppner – Squitieri 2019 Radner K. – Kreppner, J. – Squitieri, A., eds., *The Dinka Settlement Complex 2018. Continuing Excavations at Qalat-i Dinka and the Lower Town,* (Peshdar Plain Project Publications 4), Gladbeck, 2019.

Radner at al. 2020 — Radner, K. – Masoumian, M. – Karimian, H. – Azizi, E.– Omidi, K., "Neo-Assyrian Royal Monuments from Lake Zeribar in Western Iran", *Zeitschrift für Assyriologie* 110 (2020), 84-93.

Reade 1977 — Reade, J. E., "Shikaft-i Gulgul: its date and symbolism", *Iranica Antiqua* 12 (1977), 33-44.

Reade 1995 — Reade, J. E., "Iran in the Neo-Assyrian Period". In: Liverani, M., ed., *Neo-Assyrian Geography,* Rome, 1995, 31-42.

Reade 2018 — Reade, J. E., "Assyrian weights and money", *State Archives of Assyria Bulletin* 24 (2018), 125–93.

Saber – Hamza – Al-Taweel 2014 — Saber, S. A. – Hamza, H. – Al-Taweel, M., "Report on the excavations at Tell Sitak: The 2010 season", *Iraq* 76 (2014), 205-229.

Skuldbøl – Colantoni 2016a — Skuldbøl, T. B. B. – Colantoni, C., "First Results of the Rania Plain Survey. Salvage Operations in the Dokan Dam Inundation Zone". In: Kaelin, O. – Mathys, H.-P. – Stucky, R. A., eds., *Proceedings of the 9th International Congress on the Archaeology of the Ancient Near East June 9–13, 2014, University of Basel. Volume 3: Reports,* Wiesbaden, 2016, 131–145.

Skuldbøl – Colantoni 2016b — Skuldbøl, T. B. B. – Colantoni, C., "Early urbanism on the margins of Upper Mesopotamia - Complex settlement patterns and urban transformations on the Rania Plain in northeastern Iraq". In: Iamoni, M., ed., *Trajectories of Complexity. Socio-economic Dynamics in Upper Mesopotamia in the Neolithic and Chalcolithic Periods,* (Studia Chaburensia 6), 2016, 1–26.

Skuldbøl – Colantoni 2020 — Skuldbøl, T. B. B. – Colantoni C., "Interaction and Culture Contacts in the Late Chalcolithic Period. New Evidence for the Uruk Culture in the Zagros Foothills", in Eidem, J., ed., *Zagros Studies. Proceedings of the NINO Jubilee Conference and Other Research on the Zagros Region*, PIHANS 130, Leiden, 2020, 35–54.

Speiser 1926-27 — Speiser, E. A., "Southern Kurdistan in the Annals of Ashurnasirpal and Today", *Annual of the American Schools of Oriental Research* 8 (1926–1927), 1–41.

Squitieri 2016 — Squitieri, A., *Stone Vessels in the Ancient Near East during the Iron Age and the Persian Period,* Oxford, 2016.

Tyson – Herrmann 2018 — Tyson, C. W. – Herrmann, V. R., eds., *Imperial Peripheries in the Neo-Assyrian Period,* Louisville, 2018.

van Soldt et al. 2013 — van Soldt, W. H. – Pappi, C. – Wossink, A. – Hess, C. W. – Ahmed, K. M., "Satu Qala: A Preliminary Report on the Seasons 2010–2011", *Anatolica* 39 (2013), 197–239.

Vér 2014 — Vér, A., "Neo-Assyrian *kāru*'s in the Zagros". In: Csabai, Z., ed., *Studies in Economic and Social History of the Ancient Near East in Memory of Péter Vargyas*, ANEMS 2, Budapest–Pécs, 2014, 789–810.

Yamada 2005 — Yamada, S., "Kārus on the Frontiers of the Neo-Assyrian Empire", *Orient* 40 (2005), 56–90.

Zaina et al. 2019 — Zaina, F. – Baraldi, P. – Cardini, V. – Cavriani, M. – Zannini, P., "Archaeometric Characterization of a Blue Ingot from the Palace of Sargon II at Karkemish (Turkey) and the Distribution and Function of Egyptian Blue in the Near East during the Iron Age", *Mesopotamia* 54 (2019), 181–196.

Gird-i Gulak. A Neo-Assyrian fort on the eastern frontier of Assyria. A salvage project by the Danish Archaeological Expedition to Iraq.

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Introduction

The Danish Archaeological Expedition to Iraq (DAEI) has been working on the Rania Plain in northern Iraq since 2012, undertaking survey work across the plain and excavating a number of sites (Gird-i Gulak and the twin sites of Babukur). Recent work has focused on Gird-i Gulak, where the project has recovered significant Neo-Assyrian occupation; occupation that points to a substantial and well defended local administrative centre, with probable dual city walls and evidence of monumental public space, a substantial foundation platform and drainage systems. Although relatively small, Gird-i Gulak probably typifies a local node of control in this part of the Neo-Assyrian Empire. It was likely a strategically placed node lying within a regional administrative network and probably located at, and managing, intersections of communication and exchange routes traversing the Rania Plain. The plain itself is geographically distinct with restricted points of access and thus controllable. Gird-i Gulak was possibly part of the military consolidation during the Neo-Assyrian period seen with the construction of a number of strongholds important for the security and management of this transitional border zone in the hills along the western flank of the Zagros Mountains. However, the site like many others on the plain is threatened cultural heritage and is being badly damaged by persistent modern processes.

This paper briefly discusses DAEI's work on the Rania Plain, the historical and geographical context in which the work is embedded, the present threat to cultural heritage and the preliminary results of archaeological salvage work conducted at Gird-i Gulak. There is a short discussion of the results and their implications for our understanding of the site's role within the Assyrian borderlands.

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Background

A decade of archaeological work in the Kurdish region of northeastern Iraq has resulted in a better understanding of occupation in this region during the Neo-Assyrian period (c. 900-600 BC), with evidence suggesting the Zagros foothills were a strategically important region for the Assyrian empire. Textual records document Assyrian presence in the Zagros foothills dating back to the Old and Middle Assyrian periods, and it is likely most of the Zagros foothills were incorporated into the Neo-Assyrian empire as early as the late 10th or early 9th centuries BC.[8] The region appears to have played an important role in not only safeguarding the empire's eastern frontier, but also in supplying goods and water for the empire's urban centres and as a base for Assyrian eastward expansion against the polities of the Iranian Zagros.[9] The Neo-Assyrian incorporation of the Zagros mountain foothills had a substantial impact on settlement numbers and patterns. This is reflected in the archaeological record, with recent surveys in the Zagros foothills showing a settlement peak during the Neo-Assyrian period.[10]

New archaeological and textual evidence from the plains of Peshdar and Rania, located in this region at the foot of the Zagros mountains of northeastern Iraq, suggests the plains became part of the empire during the Middle Assyrian period and again during the beginning of the Neo-Assyrian period.[11] New evidence indicates the region was of significant strategic importance for the Assyrian empire and became a well-defended and densely settled frontier zone.[12] [13]

Within this broader historic landscape lies Gird-i Gulak. Excavations by DAEI point towards the site being a Neo-Assyrian administrative stronghold for an extended period and probably a small, but significant centre on the Rania Plain. Our research supports textual evidence indicating that the region was part of the Neo-Assyrian frontier zone and a subject of the Neo-Assyrian political and administrative horizon. By placing DAEI's results into this framework, we can better comprehend the overall administrative and cultural complexities of the Assyrian presence in the Zagros foothills and the specificities of the Neo-Assyrian state, such as its organisation and the defence of its eastern frontier.

The Peshdar and Rania plains

The foothills and mountains of the Zagros make for a striking landscape. On first inspection, the high mountains and rocky terrain give the impression of a massive, impassable natural barrier separating the Iranian plateau from the large plains of Iraq. A closer look reveals that numerous valleys, rivers and waterways, shallow gorges, and passes transect these mountains *(Fig. 1)*. Historical accounts of the Zagros Mountains detail routes through a diverse and complex landscape *(Fig. 2)*.[14]

[8] Liverani 2004; Miglus 2016; MacGinnis et al. 2020. See also Altaweel et al. 2012, 12-13.
[9] Fales and Fabbro 2016; Kühne 2018.
[10] Ur et al. 2013, *Fig. 15*; Morandi Bonacossi – Iamoni 2015, *Fig. 8*; Skuldbøl – Colantoni 2016b; Koliński 2017, 2019 and 2020.
[11] For a historical summary of the region see MacGinnis et al. 2020, 2-3; MacGinnis – Skuldbøl – Colantoni 2020, 89-112. See also Eidem 2018 and 2020.
[12] Radner et al. 2016; Colantoni 2018 et al.; MacGinnis et al. 2020; papers in this volume.
[13] Data presented at the 10th ICAANE (2016) conference in Munich by the Sulaimania Governorate Archaeological Survey (MAFGS) supports survey work undertaken by DAEI on parts of the Rania Plain, also recording a dense Neo-Assyrian settlement pattern on the Peshdar and Rania plains.
[14] See Wilson 1895; Speiser 1926–1927; Levine 1973.

Fig. 1. Upper aerial drone photograph shows the northern part of the Rania Plain and Lake Dokan. Lower photograph shows the hilly landscape on the western edge of the Rania Plain. Photos: Henrik Brahe and Tim Skuldbøl 2015.

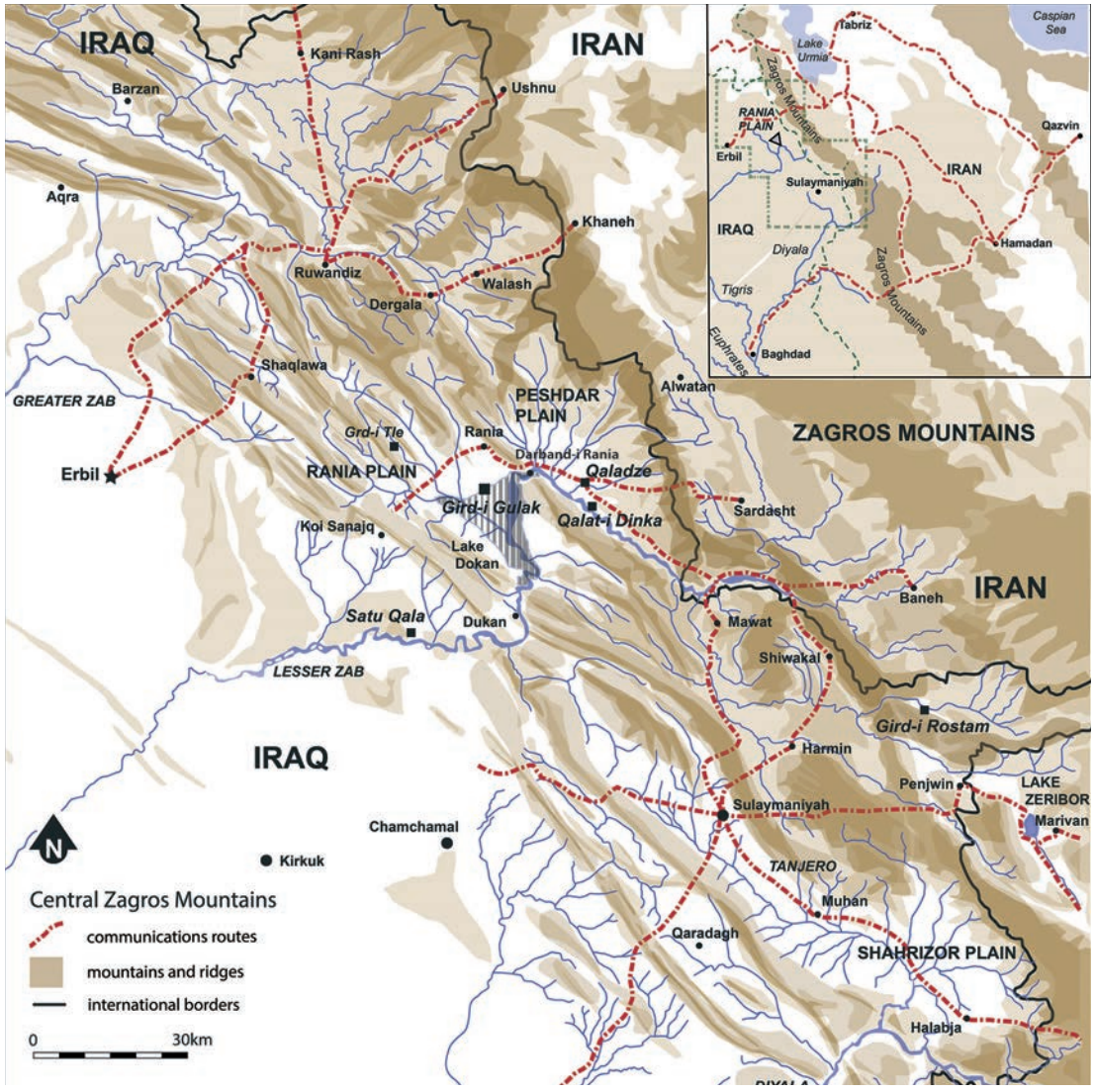


Fig. 2. The foothills of the Zagros Mountains and likely communication routes (in red) during the Neo-Assyrian period, based on Levine 1973: *Fig. 2* (compiled by Carlo Colantoni).

The twin plains of Peshdar and Rania are small, fertile valley plains enclosed by mountains, steep rolling hills and rock outcrops. Numerous small springs and waterways made the plains ideal for settlement in the past. Archaeological and historical records provide evidence that important communication routes traversed the plains. Visibility across both plains is notable, with sites prominent in the landscape. There are few access points to the plains and controlling the transit routes and access points were vital for any polity residing there. Linking the two plains is the Darband-i Rania corridor: a major but narrow transit point. Originating in the Zagros mountains of Iran, the Lower Zab river flows across the Peshdar Plain, through the Darband-i Rania corridor before traversing the Rania Plain and the plains further south, until it finally joins the Tigris River.

The corridors and transit routes of the Peshdar and Rania plains are important in understanding this region's historical development over time. Major archaeological sites are located on either side of the Darband-i Rania pass which divides the two plains, these include: Bazmusian, Qalatqa Darband and Shemshara on the Rania Plain, and Qaladze and Qalat-i Dinka on the Peshdar Plain.

DAEI has recently begun to investigate the role of the Zagros foothills in cross-cultural interaction and the development of indigenous societies. It appears that valleys and river plains within the Zagros mountains – located at intersections of communication and exchange routes – may have at times acted as special zones or interaction hubs encompassing cultural and economic exchange. This characteristic of the plains has been noted for the Late Chalcolithic period (4500-3100 BC).[15] It is likely that this is also true for the Neo-Assyrian and other periods.

DAEI's work on the Rania Plain[16]

DAEI is an international cross-institutional collaboration between the National Museum of Denmark and University of Copenhagen. The project is directed by Tim Skuldbøl, Carlo Colantoni and Mette Marie Hald. DAEI studies the anatomy and diversity of urbanism in Mesopotamia, and is investigating the impact of cross-regional interaction on urban development across the Zagros Mountains. In addition, the project contributes to the management of cultural heritage in Iraq through survey and salvage excavation of archaeological sites on the Rania Plain *(Fig. 3)*.

DAEI has been working on the Rania Plain since 2012 and has undertaken eight seasons of research. The project is investigating three sites: Babukur, Bazmusian and Gird-i Gulak. All three sites are located in the flood zone of Lake Dokan and are under severe risk of destruction.

Between 2012 and 2015 we investigated early urban development at the Late Chalcolithic (LC) period twin sites of Babukur. From 2016 to 2019 we were concerned with salvage work of the LC and Iron Age remains at Gird-i Gulak. Survey work (the Rania Plain Survey Project) was undertaken between 2013 to 2016 in the central and western part of the flood zone on the plain. It identified two major settlement peaks: one during the LC Period and the second in the Iron Age. The latter is mainly dated to the Neo-Assyrian period.[17] [18]

In 2019 DAEI, in collaboration with the University of Kurdistan in Iran, began a survey and excavation project in the regions of Baneh, Mirabad and Sardasht in Iran. These regions are located about 50 km east of the Rania Plain. DAEI is also collaborating with the Marivan Plain Archaeological Project, which has undertaken a survey in the Iranian region of Marivan – lying about 140 km to the southeast of the Rania Plain.

[15] See Skuldbøl – Colantoni 2020 and 2021.
[16] For a summary of investigations on the Peshdar and Rania plains, see Skuldbøl – Colantoni 2016; Colantoni et al 2018.
[17] See Skuldbøl – Colantoni 2016a and 2016b.
[18] Evidence from an Iraqi survey in the 1950s also points towards major occupation peaks in the Late Chalcolithic and Iron Age periods, with about 30 sites dating to the Middle and Late Assyrian periods (see Al-Soof 1970).

Fig. 3. DAEI uses a multi-scalar methodological approach that employs high-resolution surface survey, remote-sensing (satellite and drone photography), surface scraping, high-definition sampling strategies, geological coring, and targeted soundings and excavation. Photos: Henrik Brahe 2016.

Cultural heritage under threat

Archaeological sites on the Peshdar and Rania plains are endangered. Over the last few decades these plains have experienced a profound change in the state of preservation of their cultural heritage. Many archaeological sites on the plains are under intense pressure from modern urban and infrastructural development, farming, and the construction of fish ponds and chicken farms, as well as the environmental consequences of the construction of a large hydroelectric hydroelectric dam, the Dokan Dam, in the late 1950s. These factors threaten to destroy hundreds of archaeological sites. Many of these sites lie in the flood zone of the dam's reservoir, Lake Dokan. Water action during the lake's annual rise (in spring and early summer) and decline (in late summer and early winter) is very destructive; exposing and removing archaeological deposits at sites across the plain at an alarming rate *(Fig. 4)*.[19]

[19] See Skuldbøl – Colantoni 2014; Eidem 2020; Uildriks 2020.

Fig. 4. Drone images showing the Lower Zab river during a year in which the lake contained less water than normal (top), and the heavily damaged site of Bazmusian (bottom). Photos: Henrik Brahe 2015.

During the course of our field seasons we have inspected and assessed a number of sites on the Rania Plain under threat of destruction both inside and outside of the flood zone. We estimate the time available to record and investigate sites is rapidly diminishing. At the present rate of erosion and damage by human activities there may only be a few years before a substantial proportion of many sites will have been eradicated. Sites lying in the flood zone cannot be physically protected (any protective work would be prohibitively expensive and most likely be washed away) and we judge the best approach to recording the historical significance of these sites is a series of extensive rescue excavations to detail cultural material and deposits whilst they are still relatively intact. Alternatively, a less demanding

strategy may be one of annual inspections and the frequent recording of exposed remains and sampling of surface material. Although survey work has identified and dated the majority of these sites, immediate action is necessary in order to investigate and record the exposed archaeological remains visible on sites across the plain. We probably only have a small window of opportunity to start basic salvage operations before this ancient landscape is lost. Such work would be an important contribution to safeguarding and recording Iraq's less prominent cultural heritage.

Bab, Babukur South and Lower Warankah - located 400 m apart - are three of these sites under threat. With recently exposed extensive remains, including monumental buildings and numerous archaeological features, they have now been recorded *(Fig. 5)*.

Fig. 5. UAV/Drone photos of endangered sites along the edge of Lake Dokan. Upper photo shows Babukur South with the exposure of a huge palace-like building. Lower left photo shows the site of Lower Warankah, west of Bab. The site is slowly being eroded by Lake Dokan and archaeological features (pits, kilns, pots and graves) have been exposed across the site. Lower right photo shows the site of Bab; the waters of Lake Dokan have exposed the remains of an LC settlement. UAV photos: Henrik Brahe 2013-15.

Gird-i Gulak

The site of Gird-i Gulak (also known as Kullak, N 36.194027, E 44.888895) lies about 5 km south of the modern city of Rania. A paved road running directly east-west connecting the two entrance points either side of the Rania Plain passes about 2 km to the north of the site. It is likely a link between the eastern and western entrances to the plain following a similar route may have existed in the past, placing Gulak in a strategic location within a communication network stretching across the plain.

Gird-i Gulak itself is a small-to-medium size mound around 4-5 ha in size. It consists of a high mound rising about 15 m above the plain and a lower, elongated saddle *(Fig. 6)*. Natural springs located next to the site offer a favourable environment for human occupation and probably drew the initial inhabitants in the LC period to this location.

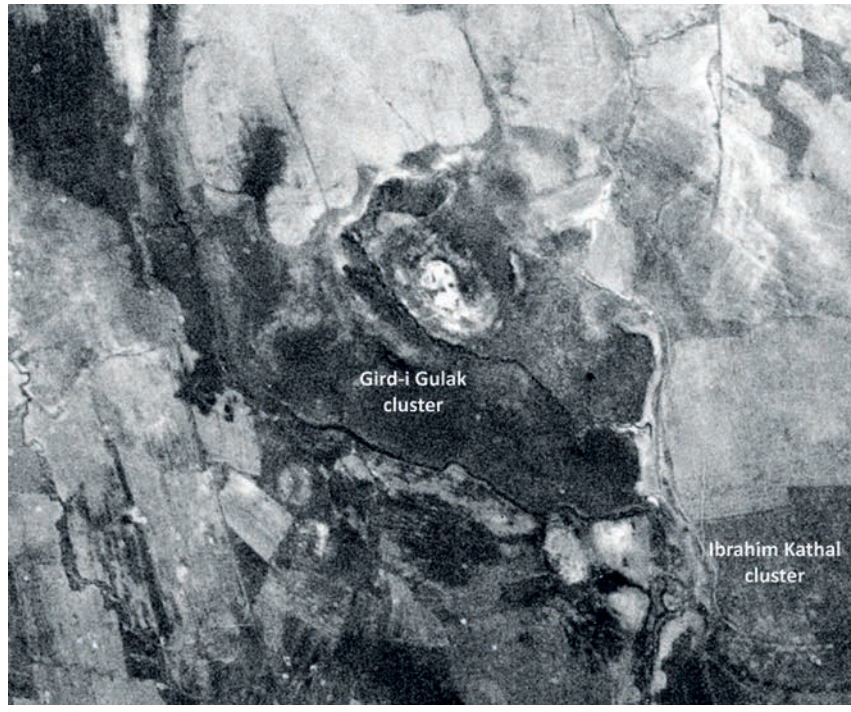
Fig. 6. Gird-i Gulak on the edge of the Lake Dokan flood zone. Upper photo shows Gird-i Gulak in autumn 2018 and bottom photo shows the site in autumn 2019. Photos Tim Skuldbøl 2018 and Henrik Brahe 2019.

Archaeological work at Gird-i Gulak

Archaeological investigations at Gird-i Gulak were first undertaken by the Iraqi Antiquities Department in the 1950s, prior to the construction of the Dokan Dam. A regional survey of sites, recording ancient settlements to be impacted by the future dam and its reservoir, noted occupation at Gird-i Gulak dating to the prehistoric, Assyrian, Median and Islamic periods.[20] In addition, the Iraqi Antiquities Department placed a large sounding on the northern side of the site, the outline of which is still visible today. Unfortunately, the results were never published.

We began work at Gird-i Gulak in 2016 with the aim of investigating organisational aspects of early urbanism and the specialised use of the landscape during the LC period. A strategy of targeted surface collection, 31 soundings and 18 soil cores allowed us to explore the human and physical topography of the site and its surroundings.[21]

We have recovered evidence of substantial LC, Iron Age (predominantly Neo-Assyrian), and late Islamic (Ottoman) period occupation at the site. Sampled pottery from the surface of Gird-i Gulak also indicates a possible Middle Assyrian use of the site. Gird-i Gulak was originally founded on a natural rise and this rise was used as a quarry and dump in the early LC period. Investigations identified a 'halo' of extensive and specialised off-site human activities surrounding the site dating to the LC and Iron Age periods.[22] In light of the current evidence, we estimate that the central mound and surrounding areas form a conglomerate of past human activities encompassing in total around 15-20 ha. Furthermore, our intensive survey of this portion of the plain identified - at a distance at about 500-800 m from Gird-i Gulak - an outer halo of smaller satellite mounds. Together with Gird-i Gulak, these form a cluster or several clusters of sites *(Fig. 7)*.



[20] Al-Soof 1970.
[21] See Skuldbøl – Colantoni 2018a: *Fig. 3* for the location of 2016-17 corings and soundings.
[22] See Skuldbøl – Colantoni 2018.

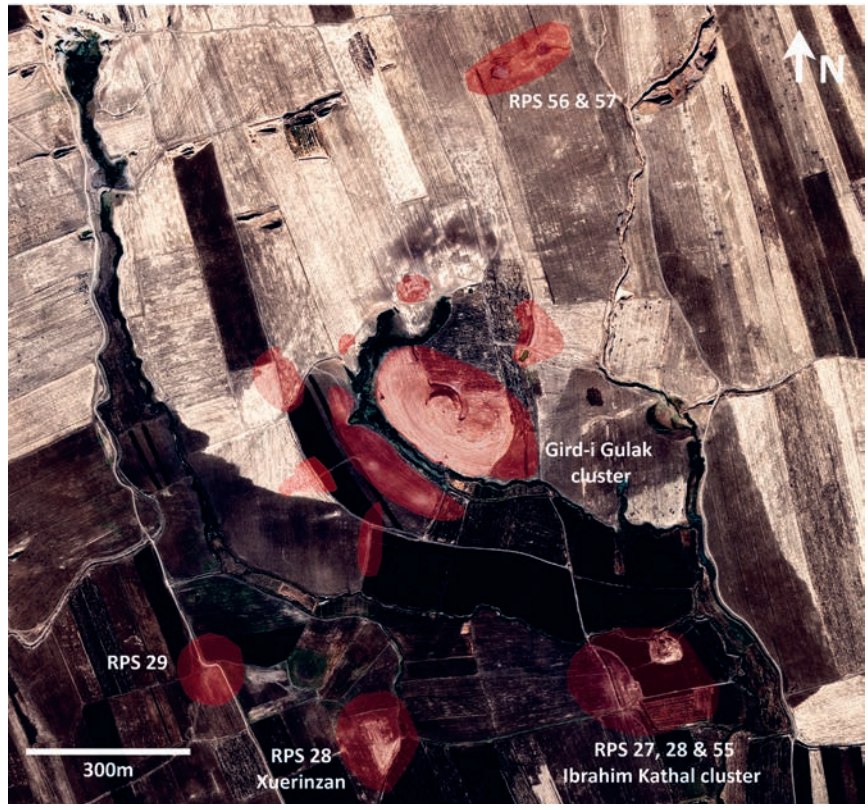


Fig. 7. Satellite images of Gird-i Gulak. Highlighted are areas of settlement or past human activities around Gird-i Gulak identified by DAEI (Corona and WorldView-2 images). Image compiled by Tim Skuldbøl.

Slow destruction

An important element of our investigations at Gird-i Gulak is the yearly assessment of the damage done to the site by human activities and natural actions.

Gird-i Gulak is in a poor state of preservation, with the site slowly being destroyed over time. Before the construction of the Dokan Dam a Kurdish farmstead or hamlet lay on the western part of the mound. On the eastern side and summit of the mound numerous Islamic burials (burial pits and cist graves) were found on the surface and in excavations. Later, following the abandonment of the site in the late 1950s, farming activities (including bulldozing to flatten the mound), random looting and pitting, and recurrent flooding by the waters of Lake Dokan caused severe damage to the site.

Years of damage have resulted in extensive remains being exposed and objects being found on the surface of the mound or out of context in erosional deposits. The flood zone is clearly a destructive environment for archaeological remains *(Fig. 8)*.

Fig. 8. DAEI worked at Gird-i Gulak between 2016 and 2019. The high waters of Lake Dokan from the spring through to early summer and the heavy rain that follows from late autumn through winter makes it almost impossible to work at Gird-i Gulak; nevertheless, there is a small window of opportunity of around 30 days in early autumn between the receding of the lake's water and the onset of heavy rain. Here we can see the difficult fieldwork conditions in 2019. During the first weeks of the season the team and equipment were transported to the site by boat. Photo: Henrik Brahe 2019.

Neo-Assyrian occupation at Gird-i Gulak: DAEI excavation results from 2016 to 2018

The Neo-Assyrian presence at Gird-i Gulak is impressive. Neo-Assyrian remains and finds have been found in almost every sounding. The excavation results confirm our surface survey, which identified Iron Age remains across the mound and its surroundings. What follows is a brief account of significant Neo-Assyrian deposits.

Sounding 10

Sounding 10 was excavated in 2016 and is a 2 x 2 m test sounding located on the lower part of the southwestern slope of Gird-i Gulak.[23] Below more than two meters of erosional debris, excavations identified the edge of a substantial mudbrick wall built of regular reddish and greyish bricks with

[23] See Colantoni et al. 2018, *Fig. 2* and Skuldbøl – Colantoni 2018, *Fig. 3*.

thick yellow mortar lines *(Fig. 9).* Associated pottery supports a Neo-Assyrian date for this wall. Taking its location on the western flank of the settlement, combined with evidence from the 2019 season (see below), it likely to be the edge of a fortification system enclosing the site.

Fig. 9. Mudbrick wall recovered at the base of Sounding 10. The wall was made of light brown, reddish and grey bricks. A thick yellowish mortar was occasionally used, but no wall plaster was identified. Photo: Henrik Brahe 2016.

Sounding 11

Sounding 11 is located at a short distance to the southwest of Sounding 10. It was excavated in 2016 to a depth of c. 2 m. To our surprise, this 2 x 2 m test sounding resulted in limited archaeological deposits and potsherds. Testing with geological coring gear at the base of the sounding probed down a further 1.5 m (total depth c. 3.5 m) and returned no traces of archaeological deposits, but rather rock hard, uniform brown waterlogged soils with lime inclusions. Therefore, it is possible that Sounding 11 is located in an artificial moat or ditch dug in antiquity for the purpose of protecting the site.

Sounding 16

Sounding 16 is located at the northern base of Gulak. It was opened in 2016 and was extended to 4 x 4 m in 2017. Excavations exposed a section of a large mudbrick structure or wall foundation and a later constructed baked brick-lined well *(Fig. 10)*. The structure likely belongs to a fortification system that circumvallated and protected the settlement. At the current stage of investigations, it is estimated to be more than 5.5 m wide. The structure was constructed in a similar way to the wall recovered in Sounding 10. Ceramics and finds (e.g. bronze and iron armour scales) recovered from beneath the base of the wall and from within the brick-lined well date to the Neo-Assyrian period.

Fig. 10. Excavation in Sounding 16 recorded a large mudbrick fortification structure. A later baked brick-lined well cut this wall. Excavation of the well was halted when the water table was reached. Modern damage to the fortification structure by bulldozing (following our excavations in 2016) is visible in the lower right corner (square cut). Photo: Henrik Brahe 2017.

Sounding 21

Sounding 21, excavated in 2017 and 2018, measures c. 6 x 8 m and is located at the eastern end of Gird-i Gulak's saddle. Several stone-lined graves (belonging to a 19th-20th century AD Islamic cemetery) were found to have cut into a large structure. The structure may have been the foundations of a fortification or terracing wall, or possibly even a gateway, running across the top of the mound *(Fig. 11).* The structure consists of a c. 3 m wide mudbrick wall or possibly tower and an outer red brown packing deposit of natural soil (possibly the remnants of a rammed earth defensive structure). This fortification structure was built into earlier LC occupation levels. Due to complicated stratigraphy, dating the structure is problematic as the limited pottery suggests an LC date. However, similarities in size and construction to sections of fortification walls recovered across the site point towards a Neo-Assyrian date for the structure.

Fig. 11. Fortification structure uncovered in Sounding 21. Red brown soil packing, up against the sectioned mud brick structure running NW-SE, is visible in the northeastern corner of the trench. A small sounding was excavated in the SE corner finding early LC remains. Photo: Tim Skuldbøl 2018.

Sounding 23

In 2017 substantial evidence of Neo-Assyrian occupation was also recovered from Sounding 23 (2 x 8 m) located on the western part of the saddle and in the central portion of the site. Beneath a layer of indistinct Iron Age deposits, part of another large mudbrick structure was exposed. It was originally interpreted as part of a large public building[24]; however, further investigations in 2019 in Soundings 28 and 31 (see below) suggest the structure was probably part of a fortification system or platform that ran across the settlement *(Fig. 12)*. Pottery and finds associated with this structure date once more to the Neo-Assyrian period *(Fig. 13)*.

[24] See Colantoni et al. 2018.

Fig. 12. Sounding 23 is located in the centre of the site. The photograph shows a segment of a large, probably Neo-Assyrian, fortification structure or platform. Visible in the SE corner is the face of a baked brick drain (see S31). Photo. Henrik Brahe 2017.

Fig. 13. A selection of predominantly Neo-Assyrian ceramics from deposits sealing the fortification structure recovered from Sounding 23. Photo. Henrik Brahe 2017.

Sounding 27

Sounding 27 (4 x 4 m) is located about 7 m to the northwest of Sounding 21. In 2018 excavations in Sounding 27 revealed a section of the fortification wall found in Sounding 21 and associated red brown packing soil *(Fig. 14)*. Constructed with the same colour and size mudbricks, these two sections of a possible fortification structure share similarities in alignment, construction and elevation.

Fig. 14. Part of a mudbrick and associated red brown packing fortification structure recovered in Sounding 27. Modern pitting and bulldozer activities have destroyed parts of the wall and packing. Photo. Tim Skuldbøl 2018.

Neo-Assyrian occupation at Gird-i Gulak: DAEI excavation results from 2019

In 2019 our work continued to focus on Neo-Assyrian occupation at the site. This followed the find by a local fisherman earlier in the year of a Neo-Assyrian clay tablet fragment originating from the site. The fragment is a contract for the sale of a field owned by six men and possibly dates to the 8th or 7th century BC. It is the first Neo-Assyrian text found on the Rania Plain.[25] The tablet find supports our growing concern that the site is being damaged by high lake water levels in recent years (see above).

[25] For a translation and detailed discussion of the tablet fragment, see MacGinnis – Skuldbøl – Colantoni, 2020, 89-112.

We excavated two large and two small soundings in the central part of the mound, and began to re-excavate and tidy the Iraqi excavation of the late 1950s. Remains of fortification structures dating to the Late Assyrian period were recovered in three of the soundings.

Sounding 28

Sounding 28 is a 4 x 18 m long trench intended to investigate the relationship between an expansive black, grey and white stone cobble surface (first identified in the southern section of the old Iraqi excavation trench) and the mudbrick structure discovered in Sounding 23 in 2017 *(Fig. 15)*.

Fig. 15. Sounding 28, a trench connecting the cobble surface and the mudbrick structure excavated in Sounding 23. UAV photo: Henrik Brahe 2019.

A large mudbrick structure or platform was found in the southern end of Sounding 28 (Fig. 16). The structure connects with the mudbrick structure excavated in Sounding 23 (see above). The structure was built of light brown, reddish and greyish mudbricks. Mortar was rarely used, making the identification of individual mudbricks difficult due to their similar colour and composition.

Fig. 16. The massive mudbrick structure found in the southern part of Sounding 28. The variation in levels on the mudbrick platform is due to the difficulty in defining individual mudbricks. In the bottom left-hand corner is a test sounding from 2017. To the north (right) and abutting the mudbrick structure a series of cobbled courtyards were identified. Photo: Henrik Brahe 2019.

Abutting the northern side of this massive mudbrick structure we uncovered three phases of the cobbled courtyard (Fig.s 17 and 18). The lower and earlier courtyards are evidence of a longer period of Assyrian occupation than initially thought at the site. The latest courtyard was constructed with alternating black, grey and white cobbles. It covers most of the northern part of Sounding 28 and extends more than 10 meters to the west and is, as mentioned above, visible in the section of the old Iraqi trench. It is very likely that in the 1950s the Iraqi team exposed and removed a large section of the courtyard. A similar courtyard with alternating coloured stones has recently been uncovered at Gird-i Tilleh/Gird-i Tle (*see paper on Gird-i Tilleh in this volume*).

Fig. 17. The well-constructed cobbled courtyard found in Sounding 28. Photos: Henrik Brahe 2019.

Fig. 18. Central part of Sounding 28 showing the excavation of two lower phases of the courtyard from the Neo-Assyrian period. A large, deep and recent robber pit cuts into the fortification wall and the lower courtyards in the central part of the sounding. Photo: Henrik Brahe 2019.

From the nature of the settlement in this period and the expanse of the features, we speculate that the stone pavements represent an extensive courtyard in front of a gateway leading to the top of the settlement. Pottery and finds associated with the wall and courtyards date to the Neo-Assyrian period.

Sounding 29

Sounding 29 (4 x 10 m) is located on the southern edge of the saddle of Gird-i Gulak, where erosion by Lake Dokan has exposed extensive mudbrick remains and baked brick features. Recent bulldozing of the area to flatten the mound for mechanised farming has resulted in severe damage to archaeological deposits.

DAEI's salvage investigations recovered an extensive mudbrick structure or a segment of a platform similar to those structures found in Soundings 23, 28 and 31. In addition, two baked brick drains were traced. These are likely to have been connected to an extensive drainage system that served the rooms and exterior surfaces of the settlement; remains of which are visible along the flanks of the saddle and in a number of soundings *(Fig. 19)*. Pottery and small finds found in association with the wall and drains date to the Neo-Assyrian period. Recovered together with the northern drain was an incomplete small Neo-Assyrian 'Palace Ware' style jar.

Fig. 19. Sounding 29. Showing the remains of the mudbrick structure or platform and two baked brick drains from the Neo-Assyrian period. Later erosion and modern activities, such as bulldozing, resulted in the probable removal of the archaeological deposits from immediately above the brickwork. Photo: Tim Skuldbøl 2019.

Sounding 31

Sounding 31 is a 4 x 5 m trench located southeast of Sounding 28, abutting the southern end of Sounding 23. It was placed to investigate the mudbrick structures recovered in Sounding 23. As we think was the case for Sounding 23, mudbricks covered the entire trench - suggesting that the mudbrick 'building' found in Sounding 23, 28, 29 and 31 is likely to be some form of platform or foundations. A baked brick drain was excavated in the central part of Sounding 31 *(Fig. 20)*. It was constructed in a similar fashion to the drains found in Sounding 29. Pottery recovered in association with the mudbrick structure and the drain again dates to the Neo-Assyrian period.

Fig. 20. Sounding 31. The uncovered mudbrick structure or platform and baked brick drain. The drain was built and capped by baked bricks and supported with cobbles. The cobbles, although most likely part of the drain feature, could also be the remains of a no longer preserved courtyard. Photo: Henrik Brahe 2019.

Recorded surface remains from Gird-i Gulak

In the summer of 2019 Lake Dokan reached its highest extent, resulting in extensive erosional damage to the site. In the following 2019 autumn season, we inspected and recorded this recent damage. The southern side of Gird-i Gulak has particularly suffered from erosion by the lake's waters over the years and in 2019 numerous archaeological features such as baked brick drains, extensive floors and surfaces, pits and pots were exposed.

On the eastern slopes of the mound cist graves belonging to a recent cemetery were exposed and the contents washed away or robbed *(Fig. 21)*.

Fig. 21. UAV/aerial drone image of the eastern side of Gird-i Gulak showing the exposed cist graves. Similar cist graves were uncovered in several soundings. Photo: Henrik Brahe 2019.

Nevertheless, the erosion by the lake did provide some benefits. Wide mudbrick fortification walls and towers could be identified at intervals along the entire perimeter of the mound (Fig. 22). These structures, when taken in the wider context of associated architecture and deposits, most likely belong to the Neo-Assyrian phase of occupation at the site. The features are visible on both the higher and lower slopes of the mound indicating that a pair of walls may have surrounded the mound; though it is also possible that the walls represent different phases of occupation.

Fig. 22. Upper: Drone image of the northern side of Gird-i Gulak showing the large exposure of mud-brick structures. Although speculative, it might represent the corner of the gateway to the settlement. Lower: Drone image of the southern side of Gird-i Gulak showing the exposed fortification wall and a tower. Photos: Henrik Brahe 2019.

Ceramics and finds from Gird-i Gulak

Ceramics collected from the excavations at Gird-i Gulak are still being studied and the following observations are therefore preliminary. Our investigations suggest the Iron Age ceramic assemblage

from the site is distinct. On first inspection, it seems to represent a typically Neo-Assyrian ceramic assemblage known from sites in the heartland of the Neo-Assyrian Empire. However, as further Iron Age sites are investigated in the Zagros foothills and evidence for local Iron Age ceramic traditions grow, a heterogeneous ceramic tradition is becoming evident. The Iron Age assemblage from Gird-i Gulak displays similarities with ceramic traditions in both northern Mesopotamia and western Iran. It is too early to establish with confidence if the ceramic repertoire from Gird-i Gulak retained a local character, as has been noted at other sites in the region.[26]

The ceramic assemblage from Gird-i Gulak includes classic Neo-Assyrian ceramic shapes, such as carinated bowls, folded and hammerhead-like rims, bowls with ring bases, necked jars with everted or triangular rims, as well as so-called Palace Ware.[27] Evidence for a local Iron Age ceramic tradition are S-shaped (carinated) bowls (*Fig. 23*, no. 9). These show similarities with the local ceramic tradition found on the Peshdar Plain.[28] A significant number of potsherds are also burnished. The burnishing of ceramics finds parallels elsewhere on the Peshdar and Rania Plains, as well as in western Iran.[29] Further studies will aim at clarifying the heterogeneous composition of the assemblage from Gird-i Gulak.

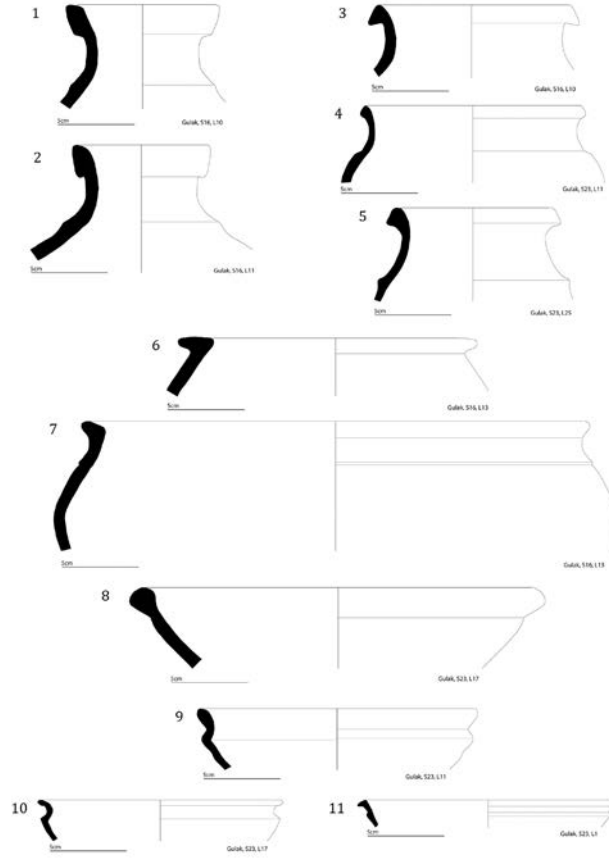


Fig. 23. Neo-Assyrian ceramics from Soundings 16 and 23.

[26] Radner et al 2016, 99.
[27] Eg. Oates 1954; Oates 1959; Curtis 1989; Fügert et al. 2014; Kreppner 2006.
[28] Eg. Radner et al. 2018, Fig. F1.8.
[29] Radner et al. 2016, 85; Tsuneki et al. 2016.

No.	Context	Surface colour	Inclusions	Comments
1	S16 L10	Greenish buff	Few fine chaff and grit	
2	S16 L11	Greenish buff	Few fine chaff and grit	
3	S16 L10	Buff	Few fine chaff and many fine grits	
4	S23 L11	Light brown	Chaff and grit	
5	S23 L25	Light buff brown	Few fine chaff, many fine grit	
6	S16 L13	Brown	Abundant grit	
7	S16 L13	Light brown	Chaff and grit	Burnished
8	S23 L17	Orange brown	Chaff and grit	Burnished
9	S23 L11	Brown ext., grey int.	Medium fine chaff	Burnished
10	S23 L17	Greenish buff	None	Fineware, burnished
11	S23 L1	Greenish buff	None	Fineware

Table 1. Description of ceramics presented in *Fig. 23*.

Discussion and conclusions

The takeover of the Zagros foothills by the Neo-Assyrian empire had a considerable impact on the region.[30] Although it is uncertain precisely when the region was integrated into the empire and later lost, it is likely there was a continuous Assyrian presence in the region for almost 300 years possibly starting with either Adad-Nirari II (911-891 BC) or at the latest by Ashurnasirpal II (883-859 BC).[31] The Assyrian impact is reflected in the archaeological record from the foothills and further east. Of significance are growth in settlement numbers, infrastructure investment providing goods and water to the imperial core, and the strategic management of the border region with the building and reconstruction of strongholds and administrative centres.

Combined excavation and survey results from the Peshdar and Rania plains are beginning to reveal a similar complex development for the period, even though the plains may not have been simultaneously under Neo-Assyrian control. Notable is a peak in settlement numbers. A number of combined factors may have been responsible for this peak and could explain this settlement development, including a considerable investment in the administrative and military control of the plains together with other measures such as possibly enforced settlement.

Of note is the building of forts and strongholds on the Peshdar and Rania plains marking the military consolidation of the region. The forts and strongholds were placed at strategic locations: on major axes of communication or at entryways to the plains. The construction of the fort of Usu Aska, strategically located at the Darband-i Rania corridor (currently being investigated by the British Museum)[32]; the fortress of Qalat-i Dinka on the Peshdar Plain (currently being investigated by the German Peshdar Plain Project)[33]; the large stronghold of Gird-i Tilleh/Gird-i Tle (investigated by a Eötvös Lorand University team)[34]; together with the site of Gird-i Gulak, are important cases of Neo-Assyrian investment for controlling and safeguarding the region.[35]

[30] See Radner et al. 2020 for a discussion of the Neo-Assyrian expansion into foothills and western Iran to the south of the Rania Plain.
[31] See MacGinnis – Skuldbøl – Colantoni 2020, 89-112
[32] See MacGinnis et al. 2020.
[33] See Radner et al. 2016.
[34] See Dezső et al. 2017.
[35] Other possible Neo-Assyrian settlements or strongholds are: Qaladze (see D'Agostino et al. 2016); Dugirdkan (see Eidem 2020); Qalat Said Ahmada (see Tsuneki et al. 2016); see Al-Soof 1970 and Eidem 2020 for further potential important Neo-Assyrian sites on the Rania Plain.

In the case of Gird-i Gulak, the fortress was a substantial and well-planned construction. Evidence recovered from surface collections and excavation suggests that during the Iron Age Gird-i Gulak was protected by a double fortification system. DAEI has been able to plot a lower wall running along the base of the site and an upper wall that may have been integrated into a large terracing platform covering the central part of the site's saddle. Both the upper and lower defensive structures appear to have mudbrick towers *(Fig. 24)*.

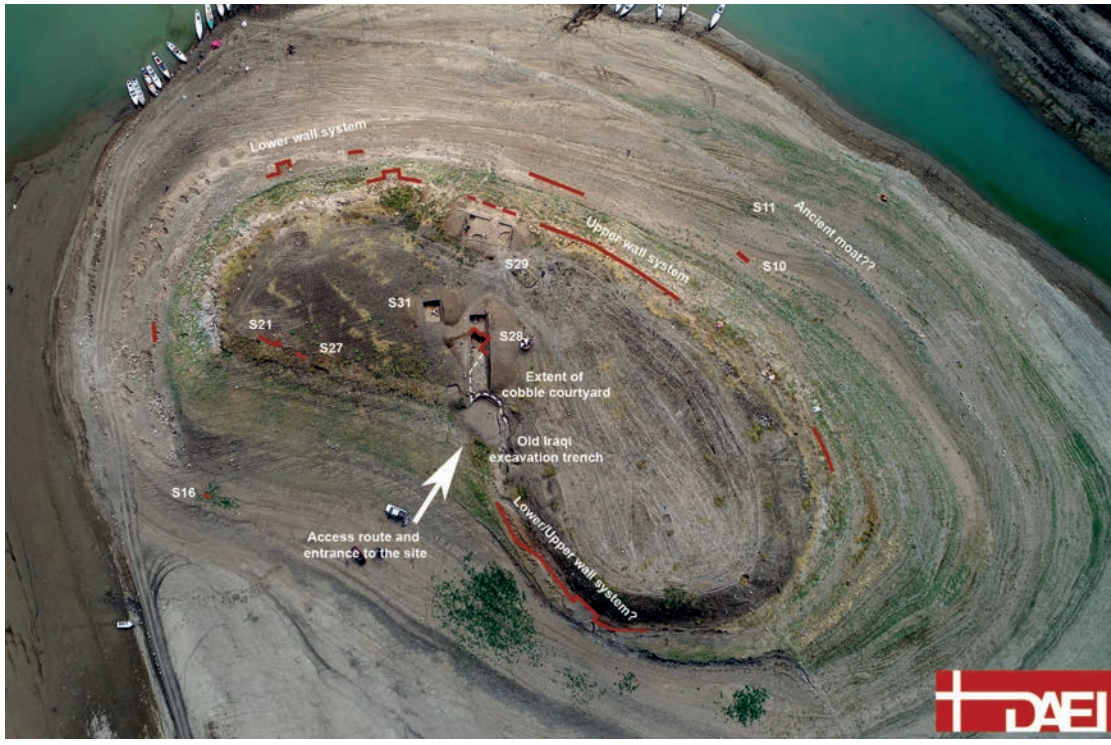


Fig. 24. Location of mudbrick walls (red) observed on the surface of the mound and in the excavation of soundings. Evidence suggests that Gird-i Gulak was protected by a double fortification system and perhaps also a moat. A large and centrally located cobbled courtyard may indicate the entrance to the settlement. Illustration compiled by Tim Skuldbøl.

The lower wall system has been identified in several locations on the surface at the base of the mound, as well as in two soundings (S10 and S16). At least one, possibly two, towers have been located on the surface and in excavations. Evidence from S16 suggests the lower mudbrick wall was more than 5.5 m wide.

The upper wall system or platform was identified on the edge of the saddle and in five soundings (S21, S23, S28, S29, S31). The structures recovered in S21 and S28 may represent parts of towers or bastions. However, work in S23, S29 and S31 produced evidence of a major terracing platform on the saddle as contiguous mudbricks seem to run across all those soundings. Evidence for walls and associated deposits above the platform are inconclusive. Whether the latest phase of occupation and remodelling was never completed or the walls and deposits were destroyed later or have eroded away requires further investigation. Therefore, the baked brick drains uncovered in S23, S29 and S31 are, at this moment, the only firm indications for the use and spatial organisation on top of the platform.

From the associated ceramics and finds it seems evident that both wall systems date to the Neo-Assyrian period, although it is not yet clear whether they were contemporary. The identifi-

cation of several phases of cobbled courtyards, of which the lowest two were partly built over by an extension of the large platform, implies that some major remodelling and recurrent investment was undertaken at the settlement during the Neo-Assyrian period. The baked brick well excavated in S16, which cuts an earlier fortification wall, further points to a longer Neo-Assyrian presence at Gird-i Gulak.

Parallels for the mudbrick fortification walls with their incorporated towers seen at Gird-i Gulak can be found in the central and western parts of the Neo-Assyrian empire; for instance, at the site of Tell Sheikh Hamad (the ancient city of Dur-Katlimmu located on the Lower Khabur river in eastern Syria), where a large mudbrick defensive work was found in the Lower Town.[36] Likewise, baked brick drains similar to those found at Gird-i Gulak and dating to the late Neo-Assyrian period have also been excavated in the Lower Town of Tell Sheikh Hamad. These baked brick features provided drainage for the bathrooms and courtyards of an elite residence, the so-called "Red House".[37]

In light of this, the architectural and artefactual evidence from Gird-i Gulak - the assemblage of classical/typical Neo-Assyrian ceramic forms and high-status objects[38], and the fragment of an inscribed clay tablet[39] - presents a strong case for the site being a small fortified administrative centre dating to the Neo-Assyrian period. Although we do not yet understand the relationship between Gird-i Gulak and other centres and strongholds on the Peshdar and Rania plains from this period, Gird-i Gulak's strategic location, the large investment in the site's fortification systems and its possibly long occupation makes it plausible that Gird-i Gulak played an important role as a node in the Assyrian control of this transitional border zone. Additionally, we do not as yet understand the significance of local and western Iranian ceramic traditions in the collected assemblages from Gulak. It may signify strong cultural interactions across the Zagros Mountains, as identified by DAEI for the LC period. This synthesis of traditions may also point to the continued settlement of local populations despite the political transformation of the region.

By employing an extensive test strategy incorporating surface survey, test soundings and corings DAEI has started to build a picture of LC and Neo-Assyrian occupation at Gird-i Gulak. However, in order to fully understand and reconstruct the site's biography, as well as its geological and human topography, further investigations are needed. As the site is being severely damaged by Lake Dokan and modern human activities, continued salvage investigations at the site are imperative. Following our investigations of the saddles of the mound, Gird-i Gulak's high mound appears to be an obvious place to concentrate efforts to recover preserved in situ deposits from the Neo-Assyrian period. In 2017 we excavated a 2 x 2 m sounding (S24) on Gulak's high mound. Below around 2 m of modern deposits and late Islamic cist graves we identified what seem to be well-preserved Neo-Assyrian layers. We believe the high mound of Gird-i Gulak may hold the main administrative complex of the site. If our assessment of the nature of the site is correct, there is likely to be a Neo-Assyrian administrative complex that may contain textual records that would shed light on the mechanisms of control on the plain. It is also likely the archaeological deposits on the high mound are in a better state of preservation as this portion of the site remain above Lake Dokan's high water mark and later deposits likely protect the Neo-Assyrian remains from erosion and modern activities. Future excavation in this part of Girdi Gulak will likely produce further insights into the nature and the extent of Neo-Assyrian control of the region; thus contributing to a better understanding of the means by which empires maintained authority over their peripheral border regions.

[36] Kühne 1994.
[37] See Kreppner 2019; Kreppner 2016; Kreppner – Schmid 2013
[38] Makinson et al. this volume.
[39] MacGinnis – Skuldbøl – Colantoni 2020, 89-112.

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Fig. 25. The 2019 DAEI team proudly displaying their brand-new project t-shirts, with a logo designed by one of the project directors. Photo: Henrik Brahe 2019.

Bibliography

Al-Soof 1970 — Al-Soof, B. Abu, "Mounds on the Ranya Plain and Excavations at Tall Basmusian (1956)". *Sumer* 26 (1970), 3–31 and 65–104.

Altaweel et al. 2012 — Altaweel, M. – Marsh, A. – Mühl, S. - Nieuwenhuyse, O. – Radner, K. – Rasheed, K. – Saber, A. S., "New Investigations in the Environment, History, and Archaeology of the Iraqi Hilly Flanks: Shahrizor Survey Project 2009-2011", *Iraq* 74 (2012), 1–35.

Bonacossi – Iamoni 2015 Morandi Bonacossi, D. – Iamoni, M., "Landscape and Settlement in the Eastern Upper Iraqi Tigris and Navkur Plains: The Land of Nineveh Archaeological Project, Seasons 2012-2013", *Iraq* 77 (2015), 9–39.

Colantoni – Makinson – Skuldbøl 2018 Colantoni, C. – Makinson, M. – Skuldbøl, T. B. B., "The Assyrian eastern frontier. Girdi Gulak, a fortified settlement in the Zagros foothills. Preliminary results of the Danish Archaeological Expedition to Iraq", *Ash-sharq. Bulletin of the Ancient Near East: Archaeological, Historical and Societal Studies* 2/1 (2018), 13–23.

Curtis 1989 Curtis, J., *Excavations at Qasrij Cliff and Khirbet Qasrij.* (Saddam Dam Report 10), London, 1989.

D'Agostino et al. 2016 D'Agostino, A. – Eidem, J. – Giannessi, D. – Mazzoni, S. – Orsi, V. – Raheem, K. R., "Archaeological Survey of Qaladze (Sulaymania Governorate, Iraq), 2013", *Anatolica* 42 (2016), 77–110.

Dezső et al. 2017 Dezső, T. – Kalla, G. – Ismail, B. B. – Bödőcs, A. – Fülöp, K. – Király, A. – Khwshnaw, A. – Szabó, N. – Németh, V. – Németh, F. A. – Amin, A.A.H., "Preliminary Report on the Hungarian Archaeological Mission (Eötvös Loránd University) at Grd-i Tle (Saruchawa) in Iraq. Second Season (2017)", *Dissertationes Archaeologicae* Ser. 3, No. 5 (2017), 361–391.

Eidem 2018 Eidem J., "Pakute - an Assyrian 'Ghost Castle' on the Raniya Plain", *As-sharq - Bulletin of the Ancient Near East: Archaeological, Historical and Societal Studies* 2/2 (2018), 30–42.

Eidem 2020 Eidem, J., "Before and After the Flood. Archaeology on the Rania Plain then and now", in Eidem, J., ed., *Zagros. Proceedings of the NINO Jubilee Conference and Other Research*. (PIHANS 130). Peeters, Leiden & Leuven, 2020, 99–130.

Fales – Fabbro 2016 Fales, F. M. – Fabbro, R. D., "'Inscription D' from Sennacherib's Aqueduct At Jerwān: Further Data and Insights". In: Kopanias, K. – MacGinnis, J., eds., *The Archaeology of the Kurdish Region of Iraq and Adjacent Regions*, Oxford, 2016, 65–73.

Fügert 2014 Fügert, A., *Die neuassyrische und spätbabylonische Glyptik aus Dūr-Katlimmu / Magdalu,* (Berichte der Ausgrabung Tall Šēh Ḥamad/Dūr-Katlimmu 16), Harrassowitz Verlag, Wiesbaden, 2014.

Kolinski 2017 Koliński, R., "Settlement History of Iraqi Kurdistan: an Assessment halfway into the Project", *Polish Archaeology in the Mediterranean* 26/1 (2017), 579–590.

Kolinski 2019 *Settlement History of Iraqi Kurdistan: Navkur Plain, Al-Hazir basin,* Wiesbaden, 2019.

Kolinski 2020 *Catalogue of Archaeological Sites. Navkūr Plain. Kārbk Stream Basin,* Wiesbaden, 2020.

Kreppner 2006 Kreppner, F. J., *Die Keramik des „Roten Hauses" von Tall Šēḫ Ḥamad / Dūr-Katlimmu. Eine Betrachtung der Keramik Nordmesopotamiens aus der zweiten Hälfte des 7. und aus dem 6. Jh. v. Chr.,* (Berichte der Ausgrabung Tall Šēḫ Ḥamad / Dūr-Katlimmu 7), Wiesbaden, 2006.

Kreppner 2016 Kreppner, F. J., "The Aftermath of the Assyrian Empire as Seen from the Red House Operation in Dur-Katlimmu". In: MacGinnis, J. – Wicke, D., eds., *The Provincial Archaeology of the Assyrian Empire*, Oxford, 2016, 177–187.

Kreppner 2019 Kreppner, F. J., "Neuassyrische palatiale Architektur urbaner Eliten: Das Rote Haus von Dūr-Katlimmu". In: Wicke, D., ed., *Der Palast im antiken und islamischen Orient*, Wiesbaden, 2019, 91–108.

Kreppner – Schmid 2013 Kreppner, F. J., – Schmid, J., *Die Stratigraphie und Architektur des „Roten Hauses" von Tall Šēḫ Ḥamad/Dūr-Katlimmu. Mit Beiträgen von J. Rohde und einer Abhandlung über die Holzkohlefunde von R. Gerisch*, (Berichte der Ausgrabung Tall Schech Hamad / Dur-Katlimmu Band 11), Wiesbaden, 2013.

Kühne 1994 Kühne, H., "Tall Seh Hamad/Dur-katlimmu" 1988–1990. *Archiv für Orientforschung* XL/XLI (1993/1994), 267–272.

Kühne 2018 Kühne, H., *Water for Assyria,* Studia Chaburensia 7, Wiesbaden, 2018.

Levine 1973 Levine, L. D., "Geographical studies in the Neo-Assyrian Zagros, I", *Iran* 11 (1973), 1–27.

Liverani 2004 Liverani, M., "Assyria in the Ninth Century: Continuity or Change?". In: Frame, G., ed., *From the Upper Sea to the Lower Sea: Studies on the History of Assyria and Babylonia in Honour of A. K. Grayson*, Istanbul and Leiden, 2004, 213–226.

MacGinnis – Skuldbøl – Colantoni 2020 MacGinnis, J. – Skuldbøl, T. – Colantoni, C., "On the eastern frontier of Assyria: A newly discovered text from the Rania Plain in north-eastern Iraq", *State Archive of Assyria Bulletin,* 26 (2020), 89–112.

MacGinnis – Raheem – Ismael 2020 MacGinnis, J. D. A. – Raheem, K. R. – Ismael, B. B., "Excavations at the Darband-i Rania pass, Iraqi Kurdistan: Report on the 2016 and 2017 Seasons", *Iraq* 82, (2020), 1–40.

Miglus 2016 Miglus, P.A., "About Bakr Awa 2016". In: Kopanias, K. – MacGinnis, J., eds., *Archaeological Research in the Kurdistan Region of Iraq and the Adjacent Areas*, Oxford, 2016, 229–239.

Oates 1954 Oates, J., "Late Assyrian Pottery from Nimrud", *Iraq* 16/2, (1954), 164–67.

Oates 1959 Oates, J., "Late Assyrian Pottery from Fort Shalmaneser", *Iraq* 21/2, (1959), 130–146.

Radner – Kreppner – Squitieri 2016 Radner K. – Kreppner, J. – Squitieri, A., eds., *Exploring the Neo-Assyrian Frontier with Western Iran. The 2015 Season at Gird-i Bazar and Qalat-i Dinka, (*Peshdar Plain Project Publications 1), Gladbeck, 2016.

Radner – Kreppner – Squitieri 2018 Radner K., – Kreppner, J. – Squitieri, A., eds., *The Dinka Settlement Complex 2017. The Final Season at Gird-i Bazar and First Work in the Lower Town, (*Peshdar Plain Project Publications 3), Gladbeck, 2018.

Radner et al. 2020	Radner, K. – Masoumian, M. – Karimian, H. – Azizi, E. – Omidi, K. "Neo-Assyrian Royal Monuments from Lake Zeribar in Western Iran. A Stele of Sargon II and a Rock Relief of Shalmaneser III", *Zeitschrift für Assyriologie* (2020) 110/1, 84–93.
Skuldbøl – Colantoni 2014	Skuldbøl, T. B. B. – Colantoni, C., "Damage assessment of Iraq's past: Archaeological Heritage Management on the Rania Plain, Iraqi Kurdistan", *Middle East – Topics & Arguments (META)* Vol. 3, (2014), 41–54.
Skuldbøl – Colantoni 2016a	Skuldbøl T. B. B. – Colantoni, C., "First Results of the Rania Plain Survey. Salvage Operations in the Dokan Dam Inundation Zone". In: O. Kaelin, H.-P. Mathys, R. A. Stucky, eds., *Proceedings of the 9th International Congress on the Archaeology of the Ancient Near East June 9–13, 2014*, University of Basel. Volume 3: Reports, Wiesbaden, 2016, 131–145.
Skuldbøl – Colantoni 2016b	Skuldbøl T. B. B. – Colantoni, C., "Early urbanism on the margins of Upper Mesopotamia - Complex settlement patterns and urban transformations on the Rania Plain in northeastern Iraq". In: Iamoni, M., ed., *Trajectories of Complexity. Socio-economic Dynamics in Upper Mesopotamia in the Neolithic and Chalcolithic Periods*, (Studia Chaburensia 6), 2016, 1–26.
Skuldbøl – Colantoni 2018	Skuldbøl, T. B. B. – Colantoni, C., "The path to urbanism. Exploring the anatomy and development of early urbanism in northern Mesopotamia. Five years of investigations by the Danish Archaeological Expedition to Iraq", *Ash-sharq. Bulletin of the Ancient Near East: Archaeological, Historical and Societal Studies* 2/1 (2018), 1–12.
Skuldbøl – Colantoni 2020	Skuldbøl T. B. B. – Colantoni, C., "Interaction and Culture Contacts in the Late Chalcolithic Period. New Evidence for the Uruk Culture in the Zagros Foothills". In: Eidem, J., ed., *Zagros Studies. Proceedings of the NINO Jubilee Conference and Other Research on the Zagros Region*, (PIHANS 130), Leiden, 2020, 35–54.
Skuldbøl – Colantoni 2021	Skuldbøl T. B. B. – Colantoni, C., "Unravelling early urbanism and cultural encounters in Late Chalcolithic North-eastern Iraq". In: Baldi, J. S. – Iamoni, M. – Peyronel, L. – Sconzo, P., *Late Chalcolithic Northern Mesopotamia in Context. Papers from a Workshop held at the 11th ICAANE in Munich, April 5y 2018.* (Subartu 48), 3-22.
Speiser 1926–1927	Speiser, E. A., "Southern Kurdistan in the Annals of Ashurnasirpal and Today", *The Annual of the American Schools of Oriental Research* 8 (1926–1927), 1–41.
Tsuneki et al. 2016	Tsuneki, A. – Rasheed, K. – Saber, S. A. – Nishyama, S. – Watanabe, N. – Greenfield, T. – Ismail, B. B. – Tatsumi, Y. – Minami, M., "Excavations at Qalat Said Ahmadan, Qaladizah, Iraq-Kurdistan: Second Interim Report (2015 Season)", *Al-Rafidan* 37 (2016), 89–141.
Ur et al. 2013	Ur, J. – de Jong, L. – Giraud, J. – Osborne, J. F. – MacGinnis, J., "Ancient Cities and Landscapes in the Kurdistan Region of Iraq: The Erbil Plain Archaeological Survey 2012 Season 1", *Iraq* 75 (2013), 89–117.

Uildriks 2020 — Uildriks, M., "On the Edge. The Destruction of Archaeological Heritage in the Flood Zone of Lake Dukan, Kurdistan". In: Eidem, J., ed., *Zagros Studies. Proceedings of the NINO Jubilee Conference and Other Research on the Zagros Region*, (PIHANS 130), Leiden, 2020, 131–155.

Wilson 1895 — Wilson, C., *Handbook for travelers in Asia Minor, Transcaucasia, Persia, etc.* London, 1895.

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